The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 624.—Vol. XVII. LONDON, SATURDAY, AUGUST 7, 1847. [Price 6d.

NOTICE.—The SALE for DISPOSING of the MINING MATERIALS at WHEAL CONCORD, advertised for Thursday, the 12th August, WILL NOT TAKE PLACE. E. RENDELL, Auctioneer. 1
Callington, August 4, 1847.

LAMERTON, DEVON.

MR. RENDELL will OFFER FOR SALE, BY PUBLIC AUCTION, on Tuesday, the 10th day of August next, at Two o'clock in the afternoon, the SETT, or GRANT, to SEARCH FOR MINERALS, called, or commonly known, by the name of WHEAL WALTER, situate in the parish of LAMERTON, in the county of Devon, together with the ENGINE and MATERIALS now on the said mine, for a term of 21 years, 19 of which are now unexpired; and in case the said mine and materials are not disposed of in one lot, then, at the same time and place, the engine and materials will be sold, in convenient lots, to the best bidders, without the least reservation. 2

Consisting of a PORTABLE ENGINE, of 12-horse power, capstan and shears, capstan rope, large and small gear wheels, all complete, with cranks; shaft-bob; 1 piece of connection-rod, 21-fathom 6-inch pumps, working barrels, clackpiece and windbore to match, 4 horse-whim, whim-rope and chains, whim-kibbles, smith's bellows, anvil, vice and screw stock, a quantity of smiths' and miners' tools, about 1 ton of new iron, a lot of useful iron, a quantity of new and old timber and boards, grinding-stone and stand, chests, barrows, beam and scales, weights, smith's horse, 2 pair of yokes, with numerous other useful articles for mining and other purposes.

Any required information can be obtained of Capt. Opie, at Wheal Concord; and any further particulars of Mr. Snell, solicitor, Callington.
Callington, July 29, 1847.

EXTENSIVE AND IMPORTANT SALE OF VALUABLE MINE MATERIALS, At WHEAL GILL MINE, in the parishes of ST. CLEER and ST. IVE, CORNWALL.

MR. MURRAY has received instructions to SELL, BY PUBLIC AUCTION, on Tuesday and Wednesday, the 10th and 11th of August, 1847, by Eleven o'clock in the forenoon of each day, at the aforesaid mine, all the truly 3
VALUABLE MINE MATERIALS, &c.,
thereon—comprising ONE very superior 50-inch STEAM-ENGINE, with 11 tons boiler condensing cistern, and one piece of rod complete, nearly new, and constructed on the most approved principle.

1 Excellent WATER-WHEEL, 50 feet diameter, and 2 feet 3 inches breast, with plate blocks and brasses.
1 Ditto, 21 feet diameter, and 4 feet breast, with blocks and brasses, complete.
36 Fathoms of 15-inch drawing-lifts, with 14-inch working barrel and windbore, with clack seating and buckets.
14 Fathoms of 9-inch drawing-lifts, with 8-inch working barrel and windbore, clack seating and buckets, all complete.
40 Fathoms of 12-inch plunger-lifts, with plunger-pole, case, stuffing-box and gland; H-piece, windbore, clacks and seating; 1 12-inch plunger-pole, with case and stuffing-box; 1 12-inch pump, with windbore and doorpiece; 1 6-feet 10-inch working barrel, 1 11-feet 8-inch working barrel, 1 9-feet 12-inch pump, 1 3-feet 12-inch pump, 3 1 foot matchings, to suit 8 and 12-inch pumps; 1 6-feet 9-inch pump, 1 3 feet matching, to 9 and 11-inch pumps; 40 fathoms of 12-inch main-rods, strapping-plates and rod-pins; 30 fathoms of 6-inch hanging-rods, with strapping-plates and rod-pins; capstan and shears, with sheaves, complete; 80 fathoms of 12-inch capstan rope, 2 horse-whims, whim-rope and chain, 4 whim-kibbles, 26 fathoms of 2½-inch bucket-rods, 14 fathoms of 1¾-inch ditto, 17 fathoms of 1¾-inch ditto, 26 fathoms of 1¼-inch ditto, 3 whim-pulleys, 60 fathoms of 2 and 1¾-inch flat iron-rods, 100 fathoms of ladders, 50 fathoms of large launders, 30 fms. of small ditto, 100 fathoms of 6 and 4-inch air-pipes, 1 36-inch smith's bellows, 1 anvil, large vice, smith's horse, screw stock, hand screw, a quantity of new and old iron, lot of steel, smiths' and miners' tools, a great quantity of new and old timber, miners' chests, wheel and hand barrows, sieves, carpenter's bench, and a great variety of other useful articles.—Also, the COUNT-HOUSE FURNITURE, &c.

To view the above superior lot of valuable materials, apply to Capt. Faull, on the mine; and for further particulars, to Mr. Robert Taylor, the purser; or Mr. William Murray, auctioneer, &c.

Deadi Castle Villa Auction and Mining Offices, Liskeard, July 23, 1847.

DEVONSHIRE.—DESIRABLE FREEHOLD ESTATE,
Midway between Plymouth and Tavistock, with RESIDENCE for a family of respectability;
Also, A COPPER AND TIN LODE,
Which promise to be very productive, with peculiar advantages afforded for working them.

MR. FOOKS is instructed to SELL, BY AUCTION, at the Royal Hotel, Plymouth, on Thursday, the 19th August, 1847, at Two o'clock, the
FREEHOLD ESTATE OF HOO MEAVY,
which consists of a most convenient COTTAGE RESIDENCE, with walled-in gardens, lawn and pleasure grounds, detached farm buildings, well-arranged stables, coach-houses, &c., and about SEVENTY-FIVE ACRES of exceedingly good LAND, in a high state of cultivation. There are 30 acres in plantation of forest, fir, and other trees, in a very thriving condition. This property is delightfully situate, at the head of the far-famed Bickleigh Vale, about 6 miles from Plymouth and Tavistock. There is an abundant supply of water to the house and grounds, and the River Meavy flows at the foot of the estate, which is on the declivity of a hill, fronting south. The neighbourhood abounds with game, and the valuable lands of Sir Ralph Lopes, Bart., and Sir Trayton Drake, Bart., abut on this estate.
A COPPER AND TIN LODE 4
have been discovered on this property, which are a continuation of those lodes now in work in PLYMOUTH WHEAL YEOLAND, which promise to be *very productive*; and great facilities of conveyance will be afforded by the proposed extension of the South Devon Railway.—Two-thirds of the purchase-money may remain on security of the estate, if required.

Particulars, and map of the estate, may be obtained of Thomas Edge, Esq., solicitor, Clement's Inn, London; Messrs. Darke, solicitor, Launceston; the Royal Hotel, Plymouth; New London Inn, Exeter; on the premises; at the Auction Mart; and of Mr. Fooks, land agent, &c., 1, Serle-street, Lincoln's Inn.

FOR SALE, AT TRENOW CONSOLS MINE, NEAR MARAZION, in the county of Cornwall, an 85-inch cylinder STEAM PUMPING-ENGINE, 10-feet stroke, equal beam, with three boilers, of 26½ tons; 6 fathoms of 17-inch, 35 fathoms of 16-inch, and 10 fathoms of 9-inch PUMPS; 4 15-inch, 1 8-inch, and 1 9-inch windbores; 2 15-inch and 1 13-inch working-barrels; 4 15-inch clack seat-pieces; 1 15-inch and 1 14-inch H and top door-pieces; 1 12½-inch, 1 14-inch, and 2 15-inch plunger-poles, with suitable stuffing-boxes and glands; 2 capstans and 1 shears; 1 12-inch and 1 9-inch capstan rope, each about 100 fathoms long; 1 balance and 1 angle-bob; 80 fathoms of from 7 to 13-inch main-rods; strapping plates, bolts, and burrs; flange bolts, staples, and glands; horse-whims, whim chain, and kibbles, with numerous articles, well worthy the attention of mine adventurers and agents. 3

Application to be made to the agents at the mine; or to Mr. Henry Thomas, Mining Offices, 8, George-yard, Lombard-street, London.—Dated July 15, 1847.

FOR SALE, AT TRETOIL MINE, LANIVET, NEAR BODMIN, CORNWALL.—1 66-inch cylinder STEAM PUMPING ENGINE, with two boilers, about 20 tons, complete—one other boiler, about 12 tons; 1 21-inch cylinder STEAM PUMPING ENGINE; 44 17-inch PUMPS; 2 17-inch plunger-poles; 2 18-inch cases for ditto, with stuffing-boxes and windbores; H and door-pieces, several pumps of 11, 11¼, 9½, 8, and 6 inches, with windbores; 13-inch plunger-pole and case, 6-inch ditto, H-piece and door-piece, &c.; 8-inch plunger-pole, balance-bobs, capstans and shears; 130 fathoms 19-inch capstan-rope, whim-ropes, main-rods, strapping-plates, staples and glands, pulleys, railroad iron, tram waggons, and numerous articles, well worthy of attention—much of the pitwork and materials being nearly new, and in good condition. 4

Apply to Mr. Henry Thomas, 8, George-yard, Lombard-street, London; Mr. George Geach, Bodmin; or to Capt. Henry Williams, at the mine.—Dated July 15, 1847.

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 36-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first piece of rod.

ONE 24-inch STAMPING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch WHIM-ENGINE, 6 feet stroke, boiler, 4 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.
SIX TUBULAR BOILERS, 11 tons each.
A large IRON BALANCE-BOB, 12 tons. 7
Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, May 27, 1847.

STEAM-ENGINE, &c., FOR SALE.—FOR SALE, BY PRIVATE CONTRACT, at MAGPIE MINE, near BAKEWELL, Derbyshire, an excellent 40-inch cylinder PUMPING-ENGINE, upon the Cornish principle (stroke 9 ft. in the cylinder, and 7 feet 3 inches in the shaft), with one cylindrical boiler, about 5½ tons weight, winch, main-cage, and first piece of rod.

Capstan and shears, all iron work complete with it; 3 pairs of hammered iron-rod plates.

Three 10-inch plunger-poles, each 9½ feet long, with stuffing-boxes and glands, cases, door and H-pieces, and windbores to fit.

Three 9-inch plunger poles, each 9½ feet long, with stuffing-boxes and glands, and two cases to fit; an engine counter, or register; a quantity of rod and flange bolts, and sundry other materials.

For particulars apply to Mr. Samuel Bennetts, Alport, Bakewell.—July 27, 1847. 8

IMPORTANT AND EXCELLENT INVESTMENT.

TO COALMASTERS AND CAPITALISTS.—TO BE LET, for a term of years (as may be agreed upon), that old established concern, POLESWORTH AND BIRCH COPPICE COLLIERY, in the parish of POLESWORTH (between the towns of Tamworth and Atherstone), in the county of Warwick; and, from the well-known quality of the coal for household purposes, commands an extensive sale in the surrounding country, as well as the facility of water conveyance by canal to Coventry and the adjacent neighbourhood, where a large proportion of the produce is daily conveyed; and from its vicinity to the Trent Valley Railway (and other lines likely to be immediately formed), the property offers an unrivalled field for investment, especially as the extensive markets of the Midland Counties will herewith be opened to receive its produce.

The estate also abounds in ironstone and fire-clay—from the latter excellent bricks and tiles are now in active manufactory. 9

Mr. John Rose, of Polesworth will show the property; further particulars may be had on application to William Thomas, Esq., Bryn Merilyn, Bagilt, near Holywell, Flintshire.
July 23, 1847.

MINING ADVENTURERS' SUBSCRIPTION ROOM, ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.
CROSSMAN, SOMMERS, AND CO., AGENTS,
28, *THREADNEEDLE-STREET LONDON.*
SHARES FOR DISPOSAL. 10

Bedford United Mines	Princess Royal
Coombe Mine	Pennant
Dartmoor Consols	South Wheal Sophia
Devon and Courtenay Consols	South Wheal Maria
East Wheal Rough Tor	Victoria Tin Mining Company
Great Wheal Frederick Tin Mine	Wheal Mary and Elizabeth
Great Wheal Rough Tor	Wheal Susan
Grambler and St. Aubyn	West Wheal Rough Tor
New East Crowndale	Wheal Esa
North Wheal Camel	&c. &c. &c.

FOR SALE, a 70-inch cylinder ENGINE, without boilers.—For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne. 11

TO CAPITALISTS, MINERS, &c.—TO BE SOLD, the COALS under about 96 acres of land, with, or without, a valuable FREEHOLD ESTATE, with FARM-HOUSE, BUILDINGS, &c., in the parish of MIDSOMER NORTON, SOMERSET, 10 miles from Bath.—For particulars apply to the Rev. H. Kelsey, Folkington, Eastbourne, Sussex. 12

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire. 13

CARMARTHENSHIRE.—TO BE LET, for a term of years, from Michaelmas next, SEVERAL VEINS of COAL and CULM, known as the CATHELID COLLIERY, situate in the SWANSEA VALLEY, lying under a surface of 400 acres and upwards, within a ring fence, and (by a public railway) within one mile of the Swansea Canal. Distance from the port of Swansea six miles; from the South Wales Railway five; and the Swansea Vale Railway 2½. The above coal and culm is well known in the Devonshire and Irish markets. 14
For particulars apply (if by letter, pre-paid) to Mr. David Williams, land and mineral surveyor, Swansea.—July 31, 1847.

DUDDINGSTONE AND BRUNSTAIN COAL-FIELDS, near EDINBURGH, TO BE LET, as detailed in former advertisements. The SEAMS OF COAL are numerous, and BLACKBAND IRONSTONE may be expected in the lands, similar to that which has been recently discovered at Gilmerton, Dryden, and Greenlaw, in the same range of coal strata. Excellent LIMESTONE is known in the lands.—The near vicinity to the City and Portobello, besides other markets now opened by railway, and also the harbours of Leith and Fisherrow, with all which the existing railway, passing through the estate, connects, renders it now very eligible for colliery operations. There are two steam-engines, and other colliery machinery, at the pits, one of which is nearly sunk to the Jewel Coal.
Offers for a lease to be addressed to Mr. Geddes, 49, Albany-street, Edinburgh. 15
July 29, 1847.

CASCADE MINING COMPANY.—At a General Meeting of the shareholders of the Cascade Mine, held pursuant to Notice from the purser, at the British Mining Offices, on the 21st day of July, 1847,

J. MEE MATHEW, Esq., in the chair,

It was moved by Mr. H. Molyneux, seconded by Mr. E. L. Nugent, that the following resolutions be adopted—viz.:
That the business of this mine be transacted at the British Mining Offices.
That Mr. Nicholas Truscott be appointed the purser.
That Mr. Taunton be appointed the secretary.—Carried unanimously. 16

Moved by Mr. D. L. Williams, seconded by Mr. James Truscott,
That Messrs. Hankey and Co. be the bankers to the company.—Carried unanimously

Moved by Mr. George Chartres, seconded by Mr. D. Duthoit,
That this meeting be adjourned to Wednesday, the 18th day of August next.—Carried unanimously.

Moved by Mr. D. Duthoit, seconded by Mr. D. L. Williams,
That the names of G. W. Blanch, James Truscott, and William Snell, be inserted in the lease of this mine, on behalf of the adventurers. J. MEE MATHEW, Chairman.

It was moved by Mr. James Truscott, seconded by D. L. Williams, Esq.,
That the thanks of this meeting be given to John Mee Mathew, Esq., for his able conduct in the chair. THOS. HENRY TAUNTON, Secretary.

(Signed)	D. L. Williams.	(Signed)	Geo. Chartres.
	James Truscott.		Henry Molyneux.
	Edmund L. Nugent.		G. W. Blanch.
	Wm. Snell.		NICHS. TRUSCOTT, Purser.

GADAIR MINING COMPANY.—At a General Meeting of the shareholders of the Gadair Mine, held at the British Mining Offices, pursuant to Notice from the purser, on Saturday, the 31st July, 1847,

G. W. BLANCH, Esq., in the chair.

The Secretary reported that the lease, under date 12th of May, 1837, granted by R. L. Edwards, Esq., to Messrs. Paynter and Jones, having been surrendered, Mr. R. L. Edwards had agreed to grant a new lease, for 21 years, at a royalty of 1-16th, and that the same was in course of preparation.

It was moved by Mr. D. Duthoit, and seconded by Mr. W. Molyneux, 17
1. That a meeting of the adventurers be held on the completion of the lease, and that the purser do give seven days' notice thereof.—Carried unanimously.

It was resolved,
2. That a "finance committee" be appointed, consisting of Messrs. G. W. Blanch, J. Mee Mathews, James Truscott, W. Fenton, D. L. Williams, D. Duthoit, E. Moss, and the Rev. F. Taunton, who shall remain in office two months, but be eligible, according to the rules in the cost-book, to be re-elected.—Carried unanimously.

Moved by Mr. James Truscott, seconded by Mr. George Chartres,
3. That Messrs. Hankey and Co. be the bankers of the company, and that any three members of the committee be authorised to draw any sums requisite for the purposes of the mine, by cheque—such being countersigned by the purser.—Carried unanimously.

Moved by Mr. James Leigh, seconded by Mr. H. Molyneux,
4. That the purser do communicate with the several shareholders whose payments have not been made on the shares respectively taken by them, requiring them to pay the same to the bankers of the mine, on or before the 16th day of August, so that the financial affairs of the company may be submitted at the next meeting of the shareholders.

Moved by Mr. H. Molyneux, seconded by Mr. Wm. Fenton,
5. That Mr. Nicholas Truscott be appointed the purser of the mine.

Moved by Mr. H. Molyneux, seconded by Mr. D. L. Williams,
6. That Mr. Taunton be appointed secretary to this company.

Moved by Mr. H. Molyneux, seconded by Mr. James Truscott,
7. That the business of this company be transacted at the British Mining Offices.

Moved by Mr. H. Molyneux, seconded by Mr. James Truscott,
8. That the thanks of this meeting be given to Capt. Clymo, for his able report of the mine, and for his attention to the business thereof.

Capt. Clymo having advised that 24 men should be employed for carrying forward the operations of the mine, it was

Moved by Mr. H. Molyneux, seconded by Mr. George Chartres,
9. That Capt. Tucker be directed to set such number of men to work immediately, and that a discretionary power be vested in the finance committee for conducting the general business of the mine, and appointing any additional number of hands that may be found necessary. G. W. BLANCH, Chairman.

It was moved by Mr. James Truscott, seconded by Mr. D. L. Williams,
10. That the thanks of this meeting be given to G. W. Blanch, Esq., for his able conduct in the chair. THOS. HENRY TAUNTON, Secretary.

(Signed)	D. L. Williams.	(Signed)	Melvin Molyneux.
	J. Mee Mathew.		William Snell.
	Henry Molyneux.		William Fenton.
	G. Chartres.		Edward Moss.
	David Duthoit.		James Truscott.
	James Leigh.		NICHS. TRUSCOTT, Purser.

PATENT OFFICE AND DESIGNS REGISTRY, No. 210 STRAND.—Inventors are hereby informed, that the Official Circular of Information, detailing the most economical and proper course for the protection of new Inventions and new Designs, and containing the Reduced Scale of Fees, or further information, may be had (gratis) on application, personally or by letter, pre-paid, to F. W. CAMPIN and COMPANY, 210, Strand (corner of Essex-street), London. 18

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL. This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.
By order of the board, P. G. GREVILLE, Secretary. 19

LEAD SMELTERS, AND BUYERS OF LEAD ORES, are hereby informed, that, in future, the DUTY ORES, belonging to the COMMISSIONERS OF GREENWICH HOSPITAL, in the manor of ALSTON, in Cumberland, will be PERIODICALLY SOLD BY TENDER.—Due notice will be given of the sales, and conditions made known, by applying to Mr. Wm. Faull, the moor-master, at Alston, near Penwith. JOHN TAYLOR,
Inspector of the Mines on the Estates of Greenwich Hospital.
2, Duke-street, Adelphi, July 30, 1847. 20

TO ENGINEERS, CONTRACTORS, &c.—IRON RAILS FOR SALE.—TO BE SOLD (CHEAP), about FIVE HUNDRED TONS of MALLEABLE IRON RAILS, weighing 48 lbs. to the lineal yard. The rails have not been used, and are of the best quality.—For particulars apply to Whitcomb and Barton, 69, Old Broad-street, City, London. 21

BLAKE AND PARKIN, MEADOW STEEL WORKS, SHEFFIELD, MANUFACTURERS OF RAILWAY and OTHER SPRINGS, Improved Patent PLATED MOTION BARS, BUFFER-RODS and ENDS, CRANK PINS, PISTON RODS, ENGINEERS' FILES, CIRCULAR and MILL SAWS, and CUTTERS of all sorts. 22

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 23

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 24

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.* 25

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
MATTHEW-STREET, TAVISTOCK. 26
Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON. 27

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.
18, *THREADNEEDLE-STREET, LONDON.* 28
Mr. T. P. THOMAS is a SELLER of Gwinear Consols, at £21; West Wheal Providence, at £18—and is a BUYER of Trehanes, Herodsfoot, Herodscomb, North Pool, & East Pool.

JAMES LANE, MINING SHARE DEALER,
75, *OLD BROAD-STREET, LONDON.* 29

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON.—PROSPECTUSES may be had, and ORIGINAL SHARES ALLOTTED in the COPPER and SILVER-LEAD MINES connected with these offices, on application to the secretary, THOS. HENRY TAUNTON. 30

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, having at their command a very large SUM of MONEY for INVESTMENT, inform their friends and the public, they are prepared to make ADVANCES on the deposits of English or Foreign Railway or Mining Shares, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK at much less commission than usually charged.—6, Bank Chambers, City, opposite the Bank of England. 31

BAROSSA RANGE MINING COMPANY.—Notice is hereby given, that TWO EXTRAORDINARY GENERAL MEETINGS of the proprietors of this company will be HELD, at 13, Bedford-row, London, on Tuesday, the 10th day of August inst., at Twelve o'clock precisely, and One o'clock, on the same day, for the purpose of considering the propriety of subdividing the shares and increasing the capital of the company, pursuant to a resolution of the annual general meeting, of the 6th of April last; and for repealing, altering, and amending some of the existing laws, regulations, and provisions of the company; and, generally, for determining on the scheme of a supplementary Deed of Settlement, for accomplishing such modification of the business of the company as may be deemed desirable. CODE, BROWNE, & CO.
Dated London, August 2, 1847. 32

COMBMARTIN AND NORTH DEVON LEAD AND SILVER MINES.—Notice is hereby given, that the GENERAL ANNUAL MEETING of the shareholders in the above company will be HELD at the Counting-house, on the mine, on Wednesday, the 18th day of August next, at Twelve o'clock at noon. 33
Dated Combmartin Mine, July 22, 1847. C. R. WEBB, Secretary.

REETH CONSOLIDATED MINING COMPANY—EIGHTH ANNUAL MEETING.—Notice is hereby given, that the EIGHTH ANNUAL GENERAL MEETING of the proprietors of shares in the REETH CONSOLIDATED MINING COMPANY will be HELD at the office of the said company, No. 26, Albion-street, in Leeds, in the county of York, on Friday, the 27th day of August next, at Twelve o'clock at noon. By order of the directors, 34
JOHN BLACKBURN, Secretary.
Company's Office, 26, Albion-street, Leeds, July 27, 1847.

UNITED HILLS MINE COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the UNITED HILLS MINE COMPANY, adjourned from the 10th day of June, will be HELD at the office of the company, No. 5, Adam's-court, Broad-street, on Thursday, the 12th day of August next, at One o'clock precisely. By order of the board, 35
5, Adam's-court, Broad-street, July 22, 1847. JAMES SMITH, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 36
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*
The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 31, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen. 37

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P.; Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 2s. 6d. 38

BRUNTON'S PATENT ORE-DRESSING FRAME.—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grey; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 39

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 40

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 41
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

THE IRON HORSE.—English coal and iron are the spirit, bone, and muscle of the socializing agencies now working to bring the world's extremes into amicable neighbourhood. See what they have done to break down the barriers which once made two worlds! They have bridged the Atlantic with keels that wait not for favouring winds; until, in the sense of division, "there is no more sea" between the two hemispheres. A hundred years ago, Edinburgh and London were as far apart, by the measure of time, as Liverpool and Boston are now. English coal and iron have laid the bars of 9000 miles of railway in the New World, and of nearly twice as many more in the Old; which miles, if linked in one continuous track, would girdle the earth at its equator with a race-course for the iron horse. And the iron horse—a word for him of Saxon stock; for it matters not where he is stabled or harnessed for his mission—whether to thunder through Siberian wastes with a ukase of Nicholas; or, from Cairo to Timbuctoo, with a message from Ibrahim Pacha; or from Thibet to Calcutta, on a commercial errand—he will show his Saxon pedigree, and his Saxon groom and rider. Where he goes, there will go the English language, and the genius of the English race. From the far, still depths of Central Asia he will bring, Londonward, letters in the English tongue—letters to English churches—and then to English manufacturers and bankers—and then new furnaces and forges will illumine the hills of Wales with their midnight glow—and the tall factory-chimneys of Lancashire and Yorkshire will thicken to a forest—and labyrinths of busy, bee-winged machinery will be added to the looms and spindles plying now. And the iron horse will shake the sombre solitudes of barbarism with his giant tread, and call strange tribes of men to come out of their dens, and caves, and forest-lairs, into the sunlight and sympathy of civilisation, and to change their beast or bird-skin garments for those of fine-spun wool, or cotton. And at every place where he halts for fuel-food, he will leave a Christian missionary, and teachers of the English tongue; and returning, he will bring in his saddle-bags more letters for Bibles, and for bales of cloth and clothing—the irresistable genius and the propagation of the English race are fast Anglicising the world. Under the sceptre of England alone, there live, it is said, 140,000,000 of human beings, embracing all races of men, and dwelling between every two degrees of latitude and longitude around the globe. And there is the Anglo-American hemisphere of the English race, doubling its population every 25 years, and spreading it through the western world. And there is the English language, colonised, not only by Christian missions, but also by commerce, in every port, on every shore, accessible to an English keel. The heathen of China, or the Eastern Inde, whilst buying sandle-wood for incense to their deities, from English or American merchantmen; the sable savages that come out of the depths of Africa to barter on the sea-shore their glittering sands, their ivory, ostrich-feathers, or apes, for articles of English or American manufacture; the Red Indians of North or South America, as they come from their hunting-grounds in the deep wilderness, to sell their spoils to English or American fur companies; the swarthy inhabitants of the Ocean-islands, as they run to the beach to greet the American whale-ship, or the English East-Indiaman, bringing their yams and curiosa ware to sell to the pale-faced foreigners; all these acquire and carry back to their kindred, lessons in the English language—and home and household words of the strong, old Saxon tongue, each of which links its possessor to the magnetic chain of civilisation.—*Elihu Burritt.*

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,
26, *CORNHILL, LONDON.*
Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 42

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMBOUX, Secretary.

LEMONNIER, HAIR-WORKER to the Queen, and Member of the Academie de l'Industrie, and who obtained a Silver and Platina Medal at the Exhibition, has just INVENTED several NEW DESIGNS, as Palm Trees, Wreaths, Knots, and Cyphers, which he executes with hair in its natural state, without using gum or ther cement. A variety of Trees executed by a mechanical process. 43
No. 13, *RUE DU COQ SAINT HONORE. PARIS.*

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c. 44
By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.

REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*

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ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.
Just published (in a sealed envelope), price 2s. 6d.; or post-paid to any address, 3s. 6d., in Post-office order or stamps,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and on those Secret Infirmities and Disorders of Youth and Maturity that are usually acquired at an early period of life, which tend to destroy physical and mental energy, ardour, passion, and all the attributes of manhood. Illustrated with twenty-five coloured engravings, on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and showing the injuries that are produced in them, by solitary habits, excesses and infection. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries' Hall, London, &c. 45

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated: for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

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THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane; Gordon 146, Leadenhall-street; Purkiss, Compton-street, Soho, London. 46

Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of diseases, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.

The CORDIAL BALM of SYRIACUM is a stimulant and renovator in all cases of constitutional or acquired debility; by its use the whole system becomes restored to a healthy state of organisation. Sold in bottles, price 11s. and 33s.

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PERRY'S PURIFYING SPECIFIC PILLS are perfectly free from mercury, capsiva, and other deleterious drugs, and may be taken with safety without interference with or loss of time from business, and may be relied upon in every instance. Sold in boxes, at 2s. 9d., 4s. 6d., and 11s. each, by all medicine vendors—of whom may be had the *Silent Friend.*—Messrs. R. and L. Perry and Co. may be consulted at No. 19, Berners-street, Oxford-street, London, daily.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

TUESDAY.....Wheal Seton Mining Company—at the mine.
Condurrow Mining Company—at the mine.
Barossa Range Mining Company—offices, at Twelve.
Durham County Coal Company—George Hotel, York, at Twelve.
London and Brighton Railway offices, at One.
Newmarket Railway—London Tavern, at One.
West Cornwall Railway—offices, at One.
Reading, Guildford, and Reigate Railway—offices, at Twelve for One.
WEDNESDAY...Royal Bank of Australia—offices, at Twelve.
Chester and Holyhead Railway—offices, at One.
THURSDAY.....Hibernian Mining Company—offices, at One.
United Hills Mining Company—offices, at One.
Charing-cross Bridge Company—offices, at Twelve.
Northern and Eastern Railway—offices, at One.
Eastern Counties Railway—London Tavern, at Eleven.
European Gas Company—offices, at Two.
Great North of India Railway—offices, at Twelve.
British Rock and Patent Salt Company—offices, at One.
FRIDAY.....Llancynfelin Mining Company—offices, at Two.
London and North-Western Railway—Euston Station, at Twelve.
Great Northern Railway—London Tavern, at Twelve.
Sligo and Shannon Railway—offices, at Twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*"

EAST INDIAN RAILWAY.

A meeting of the registered shareholders of this company was held at the London Tavern, Bishopsgate-street, on Friday (yesterday), for the purpose of confirming an agreement made by the directors with the directors of the Great West of Bengal Railway Company, for the amalgamation of the two companies, and of adopting the measures necessary for carrying the same into effect, and also of receiving a report from the directors.

The chair was taken by Sir GEORGE LARPENT, Bart., chairman of the company. The notice convening the meeting having been read,

The CHAIRMAN proceeded to read the report of the directors, from which it appeared that the company had been registered under the Act of 7 and 8 Vic., c. 110; that all the necessary conditions had been complied with, and that the directors had brought their negotiations with the East India Company to a close. The terms upon which the Hon. East India Company had previously proposed to sanction the construction of two sections of the great trunk line of railroad from Calcutta to Delhi, through Mirapore—one in the lower, and the other in the upper provinces—were, that the land for the railway should be granted, free of all cost, for 99 years; and that interest, at the rate of 4 per cent. per annum for 15 years, on the capital employed on these sections (not exceeding 3,000,000*l.* sterling), should be advanced by the Hon. East India Company, such interest to commence as soon as the contract should be arranged, and the sum of 500,000*l.* paid into the East India Company's treasury—repayment of said interest being made when the profits of the line should exceed 4 per cent. The directors did not consider those terms sufficiently favourable to induce them to propose to the shareholders the adoption thereof. The directors considered the rate of guaranteed interest too low, the period too short, and the sum required to be paid down too large. Upon all these points, the directors were happy to state, that the Hon. East India Company had met them with fairness, and had agreed to raise the rate of interest from 4 to 5 per cent.; to extend the term from 15 to 21 years; and to require 100,000*l.* only to be paid upon the arrangement of the contract. The terms, therefore, which the directors had now to submit to the consideration of the shareholders were—that the East Indian Railway Company was to undertake to construct in the first instance, and to keep and work when constructed, two sections of their proposed line of railway between Calcutta and the North-Western provinces in India—one section in Upper, and the other in Lower, India; and to expend thereon the sum of 3,000,000*l.* sterling. The railway company was to carry the Government mails free of cost, and the troops and military stores at the lowest fares charged to passengers and goods. In consideration whereof, the East India Company was to guarantee a minimum dividend of 5 per cent. per annum upon sums which, in the course of three years from the date of the railway company signing the first contract with the East India Company, should be paid into the East India Company's treasury by the railway company, to an extent not exceeding 2,800,000*l.* sterling. This guarantee was to continue for a period of 25 years, and the payment of the interest was to commence as soon as the payment into the East India Company's treasury should amount to 100,000*l.*, and was to be made in London half-yearly. The East India Company was to provide and lease to the railway company, without charge or expense, for 99 years, all the land required for the railway, the land remaining the property of the Government. When the profits of the railway exceeded 5 per cent., the excess was to be divided between the East India Company and the railway company, until the amount which may have been advanced by the East India Company shall have been repaid—thus, supposing the line to pay 10 per cent., the proprietary would receive 7½ per cent., and the Government 2½ per cent., until the advances should be repaid, when the whole of the profits would revert to the proprietors. It was the unanimous opinion of the directors, that these terms were such as they could most fully recommend the proprietors to adopt; offering as they did advantages superior to those enjoyed by any railway company at home or on the continent, and removing the difficulties which, in times like the present, might otherwise prevent the railway company from raising the necessary capital for an undertaking in so distant a country as India. The guarantee established the railway payments up to 3,000,000*l.* sterling on the basis of a Government 5 per cent. stock, and offered a safe and eligible investment for money at a fair rate of interest, payable half-yearly in London, for 25 years. In addition to this certainty, the proprietors might reasonably indulge the hope of an early participation in the profits of the railway, which had been shown, by the data laid before them in April last, to promise a large additional compensation to the persons who might be disposed to embark their capital in the undertaking. Should the proprietors concur in these views, the directors hoped that authority would be given to them to close with the proposals of the Honourable East India Company. The directors were prepared to take immediate measures for carrying out the undertaking; and they hoped to be able to make such arrangements as would ensure the commencement of the works during the cold season of the present year. To accomplish this, a command of funds to some amount would be required—and they relied, therefore, upon the proprietors immediately registering their shares; for upon the number of shares registered, every arrangement must depend. The directors would receive payment in anticipation of calls, so as to allow parties to avail themselves of the East India Company's guarantee at once; but until the registration of the shares be completed, the directors could not state positively what amount per share could be so paid; they were prepared, however, to take the responsibility of receiving 15*l.* per share, expecting that the whole amount required would not exceed 20*l.* out of the 50*l.* share. The proposed amalgamation with the Great Western Railway Company of Bengal would be upon the following terms:—

1. That the subscribed shares in the Great Western of Bengal Railway Company, be exchanged for an equal number of shares in the Consolidated Company.—2. That the relative expenses of the two companies be equitably adjusted by mutual arrangement.—3. That three of the directors of the Great Western of Bengal Railway Company do join the Consolidated board.—4. And that the claims of the officers who may be displaced by the amalgamation, be considered by the Consolidated board.

The hon. baronet then went on to say, that no time had been lost in laying the result of the negotiation with the Board of Control before the shareholders. He always considered it necessary to have a substantial proprietary; that had been obtained by the company to their fullest satisfaction. It was most important to know the actual amount of shares registered; because if the shares were registered to any considerable extent, the calls would, of course, be considerably less. For the present year, no larger sum would be required than 100,000*l.*, which would be sufficient to commence proceedings at once in India; but it must be borne in mind, that 5 per cent. would be paid to the shareholders upon that sum. With respect to the amalgamation referred to in the report, he felt that they would be adding strength to their concern by taking these parties into the management with the present direction. Proposals of amalgamation had been made by other companies; but, under existing circumstances, the directors could not recommend them to the proprietors; but, as this undertaking was clearly understood to be the first to which the sanction and influence of the Hon. East India Company would be given, the directors hoped that all parties desirous of carrying out railroads in India, would unite in giving that aid to this company—upon the success of which the future extension of the system of railway communication in India depended. If the great line connecting the metropolis of India with the North-Western provinces were accomplished, there could be little doubt of similar undertakings in other parts of India being ultimately adopted. If the present opportunity be lost, it was problematical whether this improved mode of communication, offering such advantages to British India—such additional security to the Government, and such benefits to the whole empire—would not be delayed for many years, to the serious loss of the present generation. It was intended to send Mr. Stephenson, C.E., out to India with the staff of the company; that gentleman possessed the fullest confidence of the directors, and he had rendered most eminent services, hitherto, to them. With Mr. Stephenson would also be sent out other persons connected with the whole machinery of railway companies. It was the intention of the company to educate the natives of India in the use of the machinery connected with railway matters. (Hear, hear.) He felt that this subject was one of the greatest importance. Fortunately, they had a Governor-General going out to India, who, in consequence of his previous connection with the railway department of the Board of Trade, was most intimately acquainted with the whole of the questions connected with railways. He should be most happy to answer any questions that might be put to him upon the subject of the motion he was about to make, which was—that the report be received, adopted, and circulated among the proprietors; and that the directors be, and are hereby, authorised to adopt such measures as they may deem necessary for carrying into complete effect the arrangements with the Hon. East India Company, referred to in the report of the directors, subject to such modification thereof as they may deem advisable.

Mr. ANDERSON wished to know whether the proprietors would be held liable for any amount beyond the 3,000,000*l.*, stated to be the capital of the company, to be expended in any extension of the proposed railway.

The CHAIRMAN said, that it was not contemplated to make any further extension of the line than was originally proposed. He could pledge himself, on the part of the directors, not to take any other steps involving a further outlay for extensions, without laying the whole subject before the shareholders.

In answer to a question put by another shareholder,

The CHAIRMAN also stated, that it was the intention of the directors, when the preliminary proceedings were brought to a close, to obtain an Act of Parliament to reduce the 50*l.* shares into 20*l.* shares—the latter sum being considered quite necessary for carrying out all the purposes of the company.—The resolution was then agreed to unanimously.

The CHAIRMAN said, that the next resolution was, that this meeting cordially approves of the amalgamation of this company with the Great Western Railway of Bengal, upon the terms specified in the report; and that the directors be authorised to adopt measures for carrying the same into effect, subject to such modifications as them might deem proper.—The resolution was unanimously agreed to.

A vote of thanks was then, on the motion of Mr. ANDERSON, given to Mr. Stephenson, for his able services on behalf of the interests of the company.—Mr. STEPHENSON returned thanks, and stated that, if honoured with their support, he would continue to do all that lay in his power to promote the interests of the company.—A vote of thanks was also tendered to the chairman and directors of the company.—The CHAIRMAN returned thanks, and the meeting broke up.

LONDON AND SOUTH-WESTERN RAILWAY.—At the meeting of proprietors, yesterday, it was announced that the extension to the London and Waterloo Bridges would be complete in the July of next year. The dividend declared was 1½*l.* per share; the receipts of the half-year had been 129,438*l.*, the expenses 105,489*l.*—leaving profit 86,944*l.* All the branches are in satisfactory progress, and the directors are negotiating for the Dorchester line.

SWANSEA DOCK COMPANY.

The first general meeting of the shareholders of this company was held at the Guildhall Coffee-house, City, on Tuesday, the 9d inst.

Capt. MORGAN, R.N., in the chair.

The SECRETARY having read the advertisement convening the meeting,

The CHAIRMAN then said, he hoped they would be kind enough to extend to him that consideration which was due to a person who had the first time taken the chair before so many powerful and influential gentlemen as he saw before him. It appeared that this ought to have been a meeting of shareholders; but, in consequence of the difficulty and delay which had occurred in procuring the seal of this company; for instead of having it, as was expected, some four or five days ago, it was delayed until late yesterday morning, in consequence of which they could not issue all the shares for the scrip that had been delivered. Upon consulting their legal adviser, they came to an opinion, that it would be invidious if they had exchanged a portion, without exchanging all the scrip—so as not in any degree to lead to a suspicion that favour was shown to one more than to another. They could not help, therefore, the difficulty in which they were placed through the advertisement. It was now only necessary for him to ask them to be good enough to defer the meeting until some future time, when they would be summoned in the regular way by the secretary, and have due notice of the subject. He hoped this would be taken as a sufficient explanation; and he would, therefore, throw himself on their consideration. (Hear, hear.)

The SOLICITOR said, as he had been appealed to, he would merely state that the Act of Parliament provided for meetings of directors, and for meetings of shareholders, but this was a meeting of scripholders. Now, until the scrip was exchanged for the shares of the company, they could not make this a legal meeting for dealing with the ordinary business of the company. Some adjournment of the meeting must take place—or, rather, they must commence *de novo* by calling a meeting of shareholders. This should be preceded by an advertisement, calling on the scripholders to come in to exchange their scrip for shares, after which they might convene the first ordinary meeting of shareholders. (Hear, hear.)

Mr. DILLWYN (a director) observed, that if the meeting had been legal, he would have been happy to explain his views of their undertaking, which he should reserve for another occasion.

Col. CAMERON (deputy chairman) exculpated the London board from any blame for the delay in procuring the seal of the company.

Mr. JACOB MONTEFIORE (a director) stated, that he was sure the act of the Swansea board, in irregularly calling this meeting, was not intentional, although evidently done in error.

A SCRIPHOLDER thought no apology was necessary. (Hear, hear.)

Mr. MONTEFIORE said, he could say truly, that their speculation held out the brightest prospects, looking at the large trade that must, ere long, be carried on between Swansea and the Australias. There were now three or four vessels at Swansea laden with copper, and next year he had no doubt of there being 30 or 40 from the same quarter. (Hear, hear.)

The CHAIRMAN said, that at a future meeting, he had no doubt of being able to give them the most flattering expectations as to this company. (Hear.)

The meeting then adjourned.

SOUTHAMPTON DOCK COMPANY.—The half-yearly meeting of this company was held at the offices, Bishopsgate street, on Thursday last.—Col. BARLOW in the chair.—The report was very satisfactory.—The directors declared a dividend of 1 per cent. for the half-year. The receipts of the half-year had reached to 7626*l.* 11s. 11d., which was a great increase over the former half-years. A custom-house had been completed, and placed under the tenantcy of the crown. Other new works had been contracted for.—The report, after some discussion, was adopted; and a very complimentary vote of thanks was passed to the chairman and directors, when the meeting adjourned.

BOSTON, STAMFORD, AND BIRMINGHAM RAILWAY.—The half-yearly meeting of this company was held at the offices, Abingdon-street, on Saturday last—Mr. J. ARBOUIN in the chair.—The report stated, that the Act for the amalgamation with the Great Northern Company, and the several other Acts promoted by the two companies, had received the Royal Assent; that the directors had given instructions to proceed with the works forthwith, in order to complete the line, and perfect the arrangement with the Great Northern Company at the earliest possible period. For this purpose it was necessary to make a call of 2*l.* 10s. per share, making 7*l.* 10s. paid up. The accounts showed that the receipts from deposits and calls were 57,674*l.*; and the amount of expenses, 17,627*l.*: leaving a balance of 40,047*l.* in hand. The calls had been well met, only 500*l.* or 600*l.* being in arrear, whilst 2600*l.* had been paid in advance. On the completion of the line the shareholders have the option of a 6 per cent. guarantee on a capital of 250,000*l.*, or of converting their shares into Great Northern Stock, at par. It is confidently expected that the line will be completed by the 1st of July, 1848. Only one more call will be made this year.

COMPRESSED-AIR ENGINE COMPANY.—The annual meeting of this company was held at the Thatched-House Tavern, St. James's-street, on Wednesday.—The chair was taken by Mr. WILEY, in the absence of Mr. Ald. Farebrother.—The SECRETARY read a letter from Messrs. Robinson, stating that the reservoir would be ready in a few days to undergo the trial by hydraulic pressure, as they were unwilling to submit to the danger of a pneumatic trial at their establishment. The report of the directors was also read, which went into the obstacles thrown in the way of the experiment by the patentee and engineer (Mr. Parsey), whom they had thought advisable to dismiss from the company. They also alluded to the advantage that might arise from consulting others in respect to inventions for a similar purpose, before which, however, the present company should be dissolved, as it was for a specific purpose. The balance-sheet was also read, which showed an expenditure of about 3600*l.* out of the 8168*l.* received as deposits.—A long and tedious discussion took place, in which the directors, as well as Mr. Parsey, defended themselves from the charge of delay, and obstructing the experiment.—A PROPRIETOR stated, that the pumps necessary to fill this reservoir would not fill 100 atmospheres, but only 32 or 33, and that they were only the ordinary pumps used by the Portable Gas Company.—Mr. PARSEY said, they did not form part of his invention; but he maintained that they would yield 100 atmospheres, in support of which he had the letter of Mr. Hesseltyne, the engineer to the Portable Gas Company.—It was eventually agreed, that a committee of five should be appointed to confer with the directors on the affairs of the company, and to see how far they could arrange for Mr. Parsey's co-operation, and to report to another meeting to be called by the directors.—The accounts were received; and, after the transaction of some other routine business, the meeting adjourned.

OPENING OF THE RAILWAY FROM HUDDERSFIELD TO COOPER-BRIDGE.—On Monday the town of Huddersfield was again all life and activity, in consequence of the formal opening of the Cooper-bridge portion of the Huddersfield and Manchester Railway, now incorporated with the London and North-Western. The line of railway now opened commences at the newly erected station at Huddersfield, and terminates by a junction with the Manchester and Leeds line, below Cooper-bridge, near the Mirfield station. It is about three miles and-a-half long; and, although not in a perfect state of completion, the works have been pronounced, by Capt. Simmons, the Government inspector of railways, to be satisfactorily constructed, and perfectly secure for passenger traffic.—*Manchester Guardian.*

OPENING OF THE BLACKBURN, DARWEN, AND BOLTON RAILWAY.—A portion of this line was opened yesterday (Tuesday) for passenger traffic. The whole line is about 13 miles in length; the portion opened yesterday, about five miles in length, is that between Blackburn to Soughy, about a mile beyond Over Darwen. The line will not be ceremonially opened till the whole works are completed, which they cannot be before next spring. The principal work yet to finish is a tunnel of about a mile and-a-half, commencing near the end of the part now completed.—*Manchester Courier.*

WATERSPOUT IN MORECOMBE BAY.—This unusual and singular phenomenon was observed on the 25th July, about half-past one o'clock P.M. The wind was in the west, and the sky had been rather overcast most of the day. It was very evident that there was thunder at a distance, in every direction, though not heard till this time, when several claps were heard, and some lightning seen. I was residing at the time on the shore near Bolton-le-Sands. When I first observed the spout it was fully formed—the base resting on the sands, and the upper part united with an insulated dense cloud (*cumulus*). Though the sky was nearly obscured, the darkness was not so striking as is often the case in thunder storms. In observing the spout from the shore, it appeared in the direction of Kent's Bank, or N.W. The base was rather broader than the rest of the spout, and a little below the cloud it began to expand upwards, so as to assume the shape of a speaking trumpet, or a funnel; the intermediate part was of uniform thickness, and well defined. The pipe (for it was distinctly hollow) was not perpendicular, but declined east about 30°, or made an angle with the horizon of 60°. After remaining several minutes stationary, without any material change in its appearance, it began to curve more and more—not as though the cloud was moving from it, but as if the base had begun to move from the direction of the cloud; and it was soon evident that it travelled along the sands, at first very slowly, but by degrees with considerable rapidity. Soon after the motion began to be apparent the pipe became curved and less dense rather above the middle, and that part gradually vanished. During this time, the upper and lower portions remained very distinct—the lower moving with great velocity over the sands, east, towards Grange; the mass of water of which it was composed falling in torrents, and the rebound seemed from 20 to 30 ft. high—the altitude, of course, gradually diminishing. The upper portion decreased by slow degrees, the funnel-shaped part attached to the cloud remaining longest visible. I was, as near as I can tell, about four miles distant, and the phenomenon was to all appearance near the shore, and opposite to Kent's Bank. I hope there will be an account furnished of the appearance by some observer in that part, as he would have a better opportunity, from his proximity to it, than I had, of observing the different changes and appearances. As I said before, the spout being fully formed when I first observed it, I cannot say how long the whole appearance lasted, but I watched it from 5 to 10 minutes before it entirely disappeared. I find, on inquiring of those who reside near that part of the bay where I was, that waterspouts are occasionally seen, some having witnessed several within the last 20 years, and generally in the same locality. I remember that a few years ago, when travelling towards Lancaster, a waterspout was seen over that part of the bay. I refrain from speculating on the cause of the phenomenon, as it has not to my own mind been very satisfactorily accounted for, though it is generally attributed to a vacuum caused by electricity. The power required to hold suspended in the air so amazingly a mass of water must be truly prodigious.—S. M.: *Manchester Guardian.*

VALUABLE ORES IN SCINDE.

The *Telegraph and Courier* has, during the past week, supplied some interesting information on the productions of the countries adjoining Scinde, which has hitherto lain scattered about in different quarters, and is now put together in systematic form. What we at present particularly refer to are the lead, antimony, and copper ores brought from the province of Lus, in 1840, and analysed by the late distinguished Dr. Heddle, deputy assay master in the Mint. In 1841, numerous other specimens, a number of which are now before us, were collected in the same quarter by Lieut. Robertson on the journey performed by himself, Major Holland, and others, from Quettah by Kelat to Sonmeeanee —of these last, few were metalliferous—they were also examined and reported on by Dr. Heddle. A few months since, the active and indefatigable collector of Kurrachee, Mr. J. M'Leod, made a tour into the province of Lus, to examine the highlands north of Sonmeeanee, where he found lead ore abundant, chiefly as a carbonate or sulphuret—the latter being at first mistaken for an ore of antimony. They were subjected to the examination of the present deputy assay master of the Mint, one of the ablest chemists in India, and the results were still more favourable than those reported on by Dr. Heddle. The ores contain from 60 to 80 per cent. of pure metal, and are very easily reducible; the sulphuret exhibits a trace of silver, but not sufficient, so far as appears, to cover the cost of its extraction even by the beautiful economical process lately introduced. And if here we should be permitted a parenthesis of some length, we might venture on a short account of the process referred to. The reader will remember that in all metallic lead brought from the smelting furnace there is a proportion of silver, sometimes amounting to 6 or 8 per cent., generally to one or two, and when equal to the cost of fuel required for the oxidation and deoxidation of the lead, worthy of being separated from it; in like manner as there is gold in most ores of silver. The lead exposed to a strong heat in contact with the atmosphere freely unites with oxygen, and is converted into a whitish yellow ash calx or oxide, which, on a continuance of the operation, becomes bright scarlet, furnishing the red lead of commerce; the silver remains as a globule at the bottom of the pot—this is the process in its most expensive form. By that about to be mentioned, the lead is melted in a large iron pot or vat, and allowed to remain so till the silver, which is the lighter metal of the two, approaches the surface, and is skimmed off. The skimming process is carried far enough to secure nearly all the silver, and the residue of lead is run off and allowed to cool. The skimmings are next placed in a deep vessel of smaller dimensions, when the larger portion of the lead still remaining among this settles to the bottom—the vessel being a second time skimmed as before. This last process gives a highly argentiferous compound of no great volume, and it is now submitted to the reverberatory furnace, which oxidates the lead as before, leaving the pure silver behind. Instead of having some tons of lead to oxidise, a hundred weight or less may be all that is required to be subjected to the reverberatory furnace. To resume, however—Mr. M'Leod's examination was a somewhat careful one; but though pieces of lead ore were found strewed about the hills in abundance, he seems to have seen nothing to make him imagine it likely to yield such a return as would tempt the capitalist, unless it promised to be much more valuable than on analysis it proved as an ore of silver. We have before us a suite of specimens, both of the ores and the rocks in which they are found. We have noticed the former: the rocks consist of highly crystallised greenstone, hornstone, and hornstone porphyry, quartz, and the other inorganic crystalline rocks in which lead and copper ores are usually found. From the drawings and descriptions accompanying them, we gather that the rocks are split with veins and dykes in all directions, the strata appearing contorted in basin, saddle, and mantle-shape masses, often presenting themselves in the most grotesque and fantastic shapes; this, of course, goes for next to nothing, as evidence of the existence or non-existence of the ore. In formerly noticing this subject, some months back, we estimated the price of the ore in the Bombay market at something about 100 rs. to 150 rs. a ton; there is little or no fuel in the neighbourhood, and the smelting process would in all likelihood be better conducted here than on the spot—the whole economic portion of the question turns on the price at which it could be brought to market. The distance from the seashore was considerable, the country difficult, and cost of transport heavy. The Chief of Beila and his people were equally jealous of our inquiries, and suspicions of our purposes being impressed—and not unnaturally—with the conviction, that so soon as anything was found in the country to make it worthy of being seized on, it would be annexed to our dominions. We have, of course, no more right to appropriate Lus than to seize on any other state that does not belong to us. The Jam, or ruler of the country, or his superior the Khan of Kelat, would, in all likelihood, rather sacrifice the prospect of a large increase of revenue than afford us the excuse for coercing him to make his mines over to us, which a valuable out-turn might supply—we confess ourselves, at the same time, not sanguine on the point of value, even were the country our own. The whole benefit we could honestly reap from the lead or copper mines of Lus, would be as smelters, or carriers to market. Along with the specimens of ore, some coins from Beila have been forwarded us; and, assuredly, had Lord Ellenborough been allowed to carry out his grand scheme of introducing an uniform system of currency from the Hindoo Koosh to the sea, he would have had large reforms on his hands in the mint establishments of Beloochistan. It is something to be sure, to have seen the colour of the coin of the country in these parts, but such coin! Shades of Soho—soul of departed Watt—how horrified would ye look at its contemplation!—*Bombay Times, June* 19.

ON ELECTRICAL ACTION IN THE PROCESSES OF GILDING AND ZINCING.—In the processes of gilding by immersion in saline solutions, and coating iron with zinc, two facts are verified concerning the theory of electricity, which had not hitherto been clearly explained. Gilding is effected in the most advantageous manner with an alkaline bath, and zincing with an acid bath. These facts agree with the classification made by M. Berzelius, and the observations of M. Becquerel. According to M. Berzelius, gold is negative when in contact with copper; and according to M. Becquerel, gold is also negative when in contact with alkalies. There is, consequently, harmony between the two electrical actions, which is favourable to the deposit of gold in thin layers upon the copper. In the same manner zinc is positive when in contact with iron; and contact with acids causes it to assume the same electric condition. There is, therefore, here also accordance between the two electric actions. It does not, however, necessarily follow from these principle, that gilding and zincing can only be effected under the above conditions. Exceptional cases may, in fact, be produced, in which the gilding was effected in an acid or neutral bath; and zincing in an alkaline or neutral bath. It is, in fact, sufficient for the electrical action of the copper upon gold, to be more powerful than that of the acid or neutral bath upon the gold; and for the electric action of the iron upon the zinc, to be more powerful than that of the alkaline or neutral bath upon that metal. Lastly, owing to the intervention of the electric current of an electrical element (or even of a battery) the positive state which was produced by the acid bath in gilding may be converted into negative; and the negative state of the zincing bath into positive.—M. SAINTE PREUVE: *Comptes Rendus*: *Newton's Journal.*

CHINESE METALLURGY—ON CERTAIN ALLOYS OF COPPER FOR GONGS AND TAM-TAMS.*—It is only after copper has been converted into brass that it is melted and worked up into various articles. By combining it with a certain quantity of arsenic, pé-tong or white copper, is obtained, which is much more difficult to work than brass, and is only made use of by the rich. Brass produced by a mixture of copper and calamine, may be worked by the hammer while hot; but if, instead of calamine, lead be employed, it must be worked while cold. In order to render the copper fit for the construction of musical instruments, it must be alloyed with 20 per cent. of tin. These instruments are made in a single piece, and without soldering. With regard to copper utensils, of a square or round form, the parts are united by means of rivets, or by soldering. There are two kinds of solder employed for this purpose—one in which tin powder or filings are used, and another wherein powder or filings of bell-metal (composed of 80 parts of copper and 20 of tin) are employed. These copper filings are fixed upon the articles to be united, by mixing them with a paste of rice, which may be afterwards removed by washing. In this way the copper filings, which would otherwise soon be dispersed, will be deposited in the proper place. Pure copper is used for soldering silver vessels. When any copper vessel is required to be wrought by the hammer, such for instance as a tching, commonly called a lo (a gong or tam-tam, with a flat bottom), it is not necessary first to cast the metal in a round form—it may be wrought by the hammer without any preparation. If, however, it be required to form a tcho, commonly called a copper-drum (a tam-tam), or ting-nings (cymbals), the metal is first cast in a round form, and afterwards wrought into the desired form by the hammer. No anvil is used for hammering out a gong or tam-tam. For this purpose, the mass or sheet of metal is laid upon the ground. If the instrument is to be of large dimensions, several workmen are employed, who, being placed round it, keep continually beating the metal, which soon spreads, and vibrations or sounds follow the blows struck. When the centre of the tam-tam has been raised in the form of a boss, an experienced workman gives it the required tone by hammering. Two kinds of sound may be given to it—the female or sharp sound, and the male or dull sound; for this purpose, however, it is necessary to calculate within a hundredth, and even a thousandth part, the degree of elevation of centre. The male sound is produced by a great number of blows. The metal, after being wrought, is of a dull white colour; but, on being filed, resumes its natural colour.—M. STANISLAS JULIEN: *Comptes Rendus: Newton's London Journal.*—* Extracted from the little cyclopœdia *Tkien-kong-khai-wu*, published in 1637, by *Song-ing-sing.*

A VISIT TO THE DUDLEY COAL FIELD.—The sun had got far down in the west ere I quitted the deserted quarry, and took my way towards the distant town, not over, but through the hill, by a long gloomy corridor. I had been aware all day, that though apparently much alone, I had yet near neighbours; there had been an irregular succession of dull, half-smothered sounds, from the bowels of the earth; and at times, when in contact with the naked rock, I could feel, as the subterranean thunder pealed through the abyss, the solid mass trembling beneath me. The phenomena were those described by Wordsworth, as eliciting, in a scene of deep solitude, the mingled astonishment and terror of Peter Bell:—

> "When to confound his spiteful mirth,
> A murmur pent within the earth,
> In the dead earth beneath the road,
> Sudden arose! It swept along,
> A muffled noise, a rumbling sound:
> 'Twas by a troop of miners made,
> Plying with gunpowder their trade,
> Some twenty fathoms under ground."

I was scarce prepared, however, for excavations of such imposing extent as the one into which I found the vaulted corridor open. It forms a long gallery, extending for hundreds of yards on either hand, with an overhanging precipice, bare to the hill-top, leaning perilously over on the one side, and a range of supporting buttresses cut out of the living rock, and perforated with lofty archways, planting at measured distances their strong feet, on the other. Though the openings between the buttresses—long since divested, by a shaggy vegetation, of every stiff angularity borrowed from the tool of the miner—the red light of evening was streaming, in well-defined patches, on the grey rock and broken floor. Each huge buttress threw its broad bar of shadow in the same direction; and thus the gallery, through its entire extent, was barred, zebra-like, with alternate belts of sunlight and gloom—the "ebon and ivory" of Sir Walter's famed description. The rawness of artificial excavation has long since disappeared under the slow incrustations of myriads of lichens and mosses—for the quarrier seems to have done with the place for centuries; and if I could have but got rid of the recollection that it had been scooped out by handfuls for a far different purpose than that of making a grotto, I would have deemed it one of the finest caverns I ever saw. Immediately besides where the vaulted corridor enters the gallery, there is a wide dark chasm in the floor, furnished with a rusty chain ladder, that gives perilous access to the lower workings of the hill. There was not light enough this evening to show half-way down; but far below, in the darkness, I could see the fiery glimmer of a torch reflected on a sheet of pitch-black water; and I afterwards learned that a branch of the Dudley and Birmingham canal, invisible for a full mile, has been carried thus far into the very bowels of the hill. I crossed over the nest-like valley, scooped in the summit of the eminence—a picturesque, solitary spot, occupied by a corn field, and feathered all around on the edges with wood; and then crossing a second deep excavation, which, like the gallery described, is solely the work of the miner, I struck over a range of green fields, pleasantly grouped in the hollow between the Wren's Nest-hill, and the Castle-hill of Dudley, and reached the town just as the sun was setting. The valleys which interpose between the three Silurian islets of the Dudley basin are also Silurian; and as they have been hollowed by the denuding agencies out of useless beds of shale and mudstone, the miner has had no motive to bore into their sides and bottom, or to cumber the surface, as in the surrounding coal-field, with the ruins of the interior; and so the valleys, with their three lovely hills, form an oasis in the waste.—*Miller's First Impressions of England.*

THE COPPER ORE QUESTION.

TO THE EDITOR OF THE CORNWALL GAZETTE.

SIR,—In the letter of "Publius," (which appeared in the *Mining Journal* of last week,) I find it stated that the passages which I extracted from the petitions and memorials of the advocates for a repeal of the copper ore duties, and which I called their pleas, were "condensed by me in short and pithy terms." This is a mistake: and I feel bound to correct it—because it would make it appear that what I have printed in the form of quotation, was, in fact, only a compilation. To the best of my belief, every quotation is, verbatim and literatim, correct; except that trifling mistake remarked by the Liverpool committee, that I spoke of an imported article of manufacture, instead of an article imported for manufacture. I do not see the distinction in sense between these phrases; but my quotation was certainly inaccurate. The Liverpool merchants have fallen into the same misapprehension as "Publius"—(perhaps they led him there); and I should have noticed it, had it been possible to reply to this topic only, without seeming by silence to acquiesce in other statements equally incorrect, though not equally offensive; but to reply to the whole would have led me into controversy, which I wish to avoid.

London, July 19. I am, Sir, your obedient servant, C. LEMON.

THE COPPER DUTIES QUESTION.

SIR,—I proceed to examine the attempts made by the Liverpool committee to refute Sir C. Lemon's reasoning, upon the pleas put forth by the parties chiefly represented by that body, in support of their demand for the repeal of the duty on foreign ores. At the close of my letter to you on the 9th inst., I quoted the allegation of the committee, that those pleas, "as drawn up by Sir C. Lemon, state the case of the advocates of the repeal on the duties, in some points incorrectly, in others unfairly, and, as a whole, incompletely. [Page 7.] Let us see if that charge can be at all borne out.

The first of these pleas is, that "copper ore is the only raw material of manufacture still subject to a duty." And, as the committee, in the introduction of their reply, charge Sir C. Lemon with having given to these pleas "the appearance of having been extracted verbatim from the documents in question, when, in fact, they are his own compilation," it may be well to ask how the committee would form a plea, otherwise than by adopting, in the fewest words, the spirit of that language, or of those acts, out of which it is constituted? It happens that Sir C. Lemon, in so compiling them, as the committee are pleased to say, has used inverted commas, the customary sign of quotation; and, upon this, it may be, a trifling oversight, although an ordinary practice in cases of controversy, have the committee rested an imputation of unfairness against the hon. baronet.

Be it my task, therefore, in reviewing their commentary upon Sir C. Lemon's views, to absolve myself from the risk of a like charge, with reference to these pleas, by substituting, wherever it may be needful, the words used by the committee and their friends for the spirit of their language, to which last they seem to have so strong an objection. I will, in accordance with this rule, take the precise words of Messrs. Gemmell, Brothers, and Co., of Glasgow, whose sentiments are especially adopted by the committee; and will ask what construction can be put upon the following expression, found in their letter of the 31st January, 1846, to the secretary of the Board of Trade—"copper ore will remain almost, if not the only raw material subject to duty?" But, as if to make assurance of their meaning doubly sure, a memorial to the Board of Trade, forwarded somewhere about November last, but without a date, as now printed—the first signature to which is "Brownells and Co."—containing this most classical expression, applied to the present duty:—"That, inasmuch as this remaining remnant of an otherwise abandoned policy, &c.;" an exact echo of which is found in a memorial presented at the same time from the merchants, manufacturers, and others, of Wolverhampton and its neighbourhood.

This will surely warrant the view taken by Sir C. Lemon. Not so in the opinion of the committee. They say, "this wording does not correctly convey the statement actually made, which was, 'that copper ore is the only raw material imported for manufacture, which is subject to duty.'" Now, this is a miserable quibble. I have just quoted correctly from two of their own documents; and as they have, in the sentence last above quoted from their own letter, used the inverted comma, to distinguish the words as quotation, I should be glad to know, according their own doctrine, where those words are used. If it were even as they give it, that would not alter the case; but I have, more than once, carefully read the 39 pages of the Parliamentary return, professing to supply all their representations—and actually giving much more than it professes—but I find no such expression; and should be content to have my oversight corrected, if the words really exist in any of the representations of the would-be repealers.

But, enough of this sort of exposure. The committee then seize hold of two articles casually named by Sir C. Lemon, as in point—timber and tallow; and they exultingly ask—"What parallel is there between these articles and copper ore? In what sense are they raw materials imported for manufacture, we would ask Sir C. Lemon? They are imported for consumption, and not for manufacture." I must confess that I am not quite a convert to the correctness of their definition; but, upon that point, and upon the tax paid by the Cornish miner in the use of those articles, I propose to commence shortly, when meeting the pompous display of the use of British commodities in foreign mines, as a reason for encouraging them at the expense of native interests. Meanwhile, let me ask, to go no farther than other metallic bodies, why, in speaking of the copper ore duties, as the "remaining remnant" of a policy, they have kept out of sight, that "the ore of iron," and the "ore or regulus of tin," each pay duties, bearing about the same relation to the value of the perfect metal which that upon copper ore does?

I may here dismiss the first plea, and proceed to the second, that "in consequence of duties first imposed by the tariff of 1842, the trade in foreign copper ores to this country has been, and is likely further to be, materially diminished." It is somewhat refreshing, after the strong denial of anything like correctness in Sir C. Lemon's version of the first plea, just disposed of, to find that the committee have actually not denied using the extraordinary assertion, that duties upon foreign copper ores were first imposed by the tariff of 1842." They may charge their opponents with disingenuousness, if they please, however wrongfully; but I might be warranted in asking, what shorter word in the English language would best define the assertion, that the tariff of 1842 originated duties upon foreign copper ores? And, be it remembered, that this extraordinary assertion is not used once or twice only; but is made the standing topic, a sort of corner-stone, of almost every memorial, petition, or representation of any kind, sent up to the various departments of Government. It is in the first, and it is in the last, of these memorials; and few of the intervening ones are exempt from the pollution of the falsehood. I am at a loss to conceive upon what ground the parties using such language could resolve on so directly violating the truth, unless it were thereby to enlist the support of parties through the country, connected with the manufacture of metals, likely to be less accurately informed of the real state of the case than themselves. I will not do the committee the injustice to believe, that, when they were using language, asserting something so directly the reverse of the truth, they were doing so in ignorance of the fact, that the charge in the statute book upon foreign copper ore was 12*l.* 12*s.* per ton, irrespective of its richness in metal, at the very moment to which they refer, as that when a duty was first imposed. And if the tariffs in existence from that period backward two years, antecedent to 1828, when smelting in bond was first permitted, were examined, it would be found that foreign copper ores were always subject to a payment of import duty.

In the so-called reply to the statement of Sir C. Lemon, under this head, the committee labour much to fix any diminution that may have taken place in importations, upon the duties charged by the Act of 1842. Their reasoning, throughout their lengthened and most desultory, remarks upon this part of the case, is almost wholly destitute of just or proper application. To take the importation of the last year, and to compare it with the largest importation of any single previous year, is most unfair. The constant fluctuations in every department of business have shown, and ever will show, changes of equal or larger amount. The only fair mode of comparison is, by stating quantities or value with relation to averages of a certain number of years. In the present case, pertinaciously adhering, as the committee and those who act with them do, to a reference to the year 1842, as that which is the source of their difficulties, it would be quite fair in their opponents to make the comparison of the last year with 1842 only. But I decline to take that advantage; and, in the detailed statements of importation embodied in my last letter, I proved, by figures derived from official sources, that not only did the importation of last year greatly exceed that of 1845 but that it also exceeded the average of the eight years—namely, of the four years since, and the same number before 1842—by many thousands of tons; and the separate average of the four years previously to 1842, by no less than 14,757 tons. But the continued increase, from 1842 onwards, upon which the business of the last year exhibited a certain reaction from some countries, is, at the same time, strangely enough, also set down to the duties. We find, by the representation of the committee, that the British merchants connected with Chili, had advanced money to the miners, in the character of *habilitadores*, to adopt a Spanish word, used to describe the chief capitalists of the concerns; and up to the end of three years from the period of the classification of duties in 1842, their aggregate supplies of ore increased, as it is pretended, perhaps, with partial reason, in liquidation of advances made to the miners; but, as the fourth year (1846), exhibited a certain diminution, in comparison with those immediately preceding it, this outcry is raised against the duties. As regards the Chilian importers, the moment is unfortunately chosen for such an outcry, since the importation from thence in 1846 exceeded that of 1845 by 2742 tons; being the largest quantity introduced in any one year from Chili, with the exceptions of 1843 and 1844.

The quantity received from Cuba in 1846 was certainly much below that of 1845; but, with the exception of 1845, it nearly equalled that of any other year; and, as already shown, greatly exceeded the average importations of a succession of years. It was, in fact, upon the falling off in the importation from Cuba that any defalcation in the general receipts of 1846 wholly rested. To do justice to those engaged in the trade of Cuba, they are comparatively silent. Beyond the signature of a few of them to memorials, you hear little of their complaints. It is the Brownell's, and the Waddington's, with another or two in the Chili trade, and a few smelters, that make all the clamour. The Cuba miners, if the truth were obtained from them, might assign some other reason for the falling off in their exports. They might be able to tell of several veins of ore converging to one point, and forming a "bunch," which, for the time being, yielded large quantities; but, as they sink, the bunch becomes poorer; and to follow any of the separate veins, might entail upon the companies, as in corresponding cases at home, a severe loss. Or, it may be, that they could tell of claims set up by individuals, or bodies of persons, in the island, to certain rights or privileges adverse to their interests; to protect which they may be compelled to appeal to jurisdictions alike costly, tedious, and venal; and that, pending such delay, and until the adjudications of the courts are given, the working of the mines, or some of them, is seriously interfered with, if not absolutely suspended.

Is either of the cases that I have here supposed anything like the truth, in reference to the Cobre or the Santiago, or some one or more of the Cobre Mines? The parties concerned may possibly vouch for the accuracy, or otherwise, of these hypotheses. In the meantime, I must be excused for believing that the truth, when fully known and admitted, will confirm the suppositions. The observations made by Sir C. Lemon, upon this part of the case, have been most unfairly treated by the committee. Sir Charles accounted for the falling-off in the supplies from Cuba by the chances of mining. Upon this view, hypothetically stated also by myself, and which will, I apprehend, prove to be the true version of the case, the committee turn round upon him, and impute all the losses, or deficiencies of supply, to the duty. The hon. baronet accounted for the defalcation, which is a question of quantity, by a reference to natural causes; and no attempt is made to grapple with him on that, the real question at issue.

With reference to the third plea, as stated by Sir C. Lemon, that "copper ore from Chili was almost exclusively smelted in Great Britain previous to 1842;" and that "smelting had nearly ceased in Chili when the duty was imposed in Great Britain;" much, and by no means patriotic, exertion is made by the committee to show, that smelting is now in course of resumption in Chili, "by the establishment of works upon the English principle, and with the aid of English workpeople, which works now produce a quality of copper fully equal to that made at Swansea." It would appear that the quantities of bar-copper made and exported from thence, subsequently to the year 1839, are, in reality, but little known; or, if known, they are much mystified. The official accounts of the Chilian Government, as I have already shown, for the four years, 1835 to 1839, exhibited an average export of 2800 tons per annum, to all parts of the world. The merchants engaged in the Chilian trade, for some purposes best known to themselves, seem much disposed to bewilder the public mind as to the statistics of the copper trade, so far as it applies to proceedings in that country. In 1843, when, according to the showing of the committee, the fact of the duty being laid upon copper ores had only just become known, a correspondent of Messrs. Brownells tells them, that "the usual product of Chili, all smelted from wood, varies from 6000 to 8000 tons of bar-copper annually;" when we are led to believe, through the uniform language of the various memorials presented to Government, that the smelting of copper ores in Chili, previous to 1842, had been gradually decreasing, and had nearly ceased, the miners finding it more advantageous to sell or consign their ores for sale to the British merchants. Again, in January, 1845, Mr. Waddington, writing from Valparaiso to some of his correspondents in this country, says —"The exports are now upwards of 4500 tons of bar-copper." Which of these conflicting accounts are we to credit?

Upon this question of smelting in Chili, however, one thing is fully admitted on all hands—that wood does not now exist in Chili, in quantities sufficient for the wants of the copper smelter. But coal does, according to the accounts transmitted from that country; and this is truly another of the bugbears with which we are to be frightened from our propriety. The coals of Concepcion are much wanted. We are told that they are abundant, cheap, and fitted for every purpose of smelting. To the last point I beg to offer, on authority which is satisfactory to my mind, a direct contradiction. When it is proved to me that coal, weak in its general properties, and strongly impregnated with sulphur, can be beneficially employed in smelting copper ores, and not until then, shall I surrender my opinion upon that head. As to its cheapness—supposing its quality were, what it is not, good—I should be glad to be informed, on some impartial authority, whether it could be laid down at Coquimbo, Copiapo, Huasco, or any other port of the mining district of Chili, below 6*l.* or 7*l.* per ton, or 24*s.* to 28*s.* sterling? Or, what would be about the same thing, whether the ores could be brought from the northern ports to Conception, and there reduced, at a rate of cost diminishing the charges to a less amount than paying 6*l.* or 7*l.* for the coal, delivered at the ports of shipment for the ores? If not, *cui bono?* How such prices can be called cheap, when 16 to 20 tons of strong coal are required to smelt the ores that produce 1 ton of copper, I am at a loss to conjecture. If that be cheapness, then certainly the smelters of Swansea, with their coal at 3*s.* or 3*s.* 6*d.* per ton, may begin to tremble for their trade! But, supposing both these points, of quality and price, settled favourably for the views of the Chilian smelters, there is a trifling impediment to the use of Concepcion coal, whose abundance is thus so loudly proclaimed; that it is no longer to be had in sufficient quantities. It might have been reasonably expected, that the petitioners of November, 1846, would have known, and, knowing, would have been candid enough to have stated to the authorities whom they addressed, the facts contained in the following letter, written in the same year; and which is of sufficient interest to be worth copying:—

"The collieries in Concepcion were discovered by the manager of the Steam Navigation Company, at Valparaiso, and were worked simply for the supply of the steamers. It is a weak coal, but was procured at a cheap rate; and answered their purpose at the time, on account of the high freight of coal from England. For some time past the mines have been flooded with waters; and, although the steam company had some idea of clearing them by pumping, it will never again be worth their while, as, from the increase of the guano trade, the number of vessels going to that coast is so large, that freights have fallen to 20*s.* and 25*s.* per ton; and I think it must cost them as much as that to send the Chili coal to any of the coal depôts, except, of course, Concepcion itself. There is, therefore not the shadow of a chance of these mines being worked to advantage for the use of any port but that in which they are raised. There are no (copper) mines at Concepcion." The writer of this letter further says, that he was then paying 22*s.* 6*d.* per ton freight for fuel from this country.

The committee, themselves, acknowledge, what it would be folly in them to conceal, that coal cannot be imported into the northern ports of Chili, from this country, at a less price than 30*s.* per ton. A permanent and steady supply, I imagine, they will admit to be essential to the successful progress of any manufacture. And if, as is boasted, a stray cargo can, now and then, be obtained at or under 20*s.* per ton, that is likely to be more than counterbalanced by the result of any occasional deficiency of supply; which would immediately run up the price to 2*l.* or 3*l.* per ton; or the smelters must cease to work; or both these results must follow.

I have not before me, at the moment of writing, the official returns of the export of coals for the last year. In 1845, the quantity exported to Chili was 15,149 tons, and I will allow the same quantity for last year. Supposing, then, instead of dividing that supply among the numerous classes of consumers (not forgetting the large proportion required for the use of local steamers), that the entire quantity was appropriated to the smelter's use, it would convert ores into metal to the extent of somewhere about 800 or 900 tons of copper in the year, and no more; not a very formidable competition to be exposed to.

A most unfair view is taken, by the committee and their friends, upon the coal question, with reference to the freight of it outwards: which I propose to discuss more fully, when treating of the extraordinary evidence of Messrs. Budd and Brownell, before the Navigation Laws Committee upon questions of that nature. In the meantime, it may be shortly stated, that it is perfectly consistent with the general arguments of the advocates for the repeal of the duty, when adverting to Chilian smelters, to represent the facilities afforded to them by the low freight of coal outward; and, when addressing themselves to the question of the importation of ores, to speak of the high freights homewards. It would be a little more honest in such of these gentlemen as charter vessels here for the double voyage, to place a fair proportion of the outward freight upon the outward cargo, instead of throwing nearly the whole of it upon the return cargo, for the sake of effect.

The letter, of which a copy is above given, accounts for a certain additional supply of coal to Chili, through the medium of the guano ships; but these vessels, in order to make the fuel available at a reasonable price, must discharge at the ports most contiguous to the mines; and, in doing so, they might take in a portion of ores at a cheap rate, completing their landing with guano, for the same reason that the Australian ships do—as ballast for cargoes of wool; the relative proportions of measurement tonnage to dead weight being, I apprehend, not materially different in the cases of wool and guano. But whatever may be the practice on this head, it is not consistent with the repealers' policy to admit it; their object being to strain every point to the utmost, in favour of their maxim, of deprecating what they call extravagant freights homeward upon the ore.

I have thus attempted to dispose of the three first, the most important, of the pleas of the repealers, with what success each reader of these remarks will determine for himself. To my own mind they are conclusive against the arguments of the committee; and fully justify the form in which Sir C. Lemon placed them in the outset of his letter. The three remaining heads under which the hon. baronet placed the statements and representations of the *Anti-British Mining League*, as I will again call them, are as follows:—

Fourthly—"That owing to the duties recently imposed on foreign copper ores imported into Great Britain, and jealousy manifested in Chili respecting them, the trade in foreign ores is likely to be greatly diminished;" and "that the Chilian Government view the duty as a hostile and unfriendly act, which they would meet by encouraging smelting in their own and foreign countries."

The first part of this plea I have already shown to be destitute of solid foundation, as to the past trade in foreign ores. What is "likely to be" is in the womb of time, beyond the decision of the committee or myself. As to the Chilian Government deeming our measures hostile and unfriendly, there is no justification for any such feeling on their part. On the score of revenue they impose duties upon all articles exported from hence to that country, the minimum of which, as I have shown in detail in my former letters, exceeds the maximum rate of our charge upon our copper ore; which, for the like purposes of revenue, we impose upon that product of their country. And with respect to their encouraging smelting in their own and foreign countries, what I have here written will, I think, prove how little we have to apprehend upon that head, from themselves or from foreign countries; which last consideration, however, comes properly under the—

Fifth plea—"That exertions are now being made to establish smelting-works in France and Holland, as well as in the United States."

Feeling that it would be wearisome to your readers to go through a repetition of what has already been said upon that subject, I will content myself by referring to those remarks; and I maintain, in the most distinct manner, that all the fears of foreign competition are like the preparations of those countries—matters in embryo; their success being not simply matter of great doubt, but the question, in each and all of the cases, is so beset with difficulties of an almost insuperable nature, as to place that success, according to all appearances, beyond the range of their most sanguine hopes.

To come to the sixth, and last plea—"That the result of the change of 1842 has been pernicious to the foreign trade in copper, and to the manufacturing trade in this district (Manchester.") It will be seen that this part of the case has a specific reference to the district of the cotton manufacture; and is called for by the meddling interference of that "busy body," the Chamber of Commerce in Manchester; who fancy themselves privileged to obtrude their opinions upon any and every subject that comes before them. It may be well to state, that this Chamber of Commerce has all the bad qualities of the closet corporation; a term which, however little known out of that district of country, will be well understood in their own town, where a system of party or self-election has prevailed, to the exclusion, from the Chamber, of every man, however competent and respectable, who would not submit to the dictation of the little knot of Leaguers who control its measures, and pledged himself to the indiscriminate support of the most extreme doctrines of free trade which they may promulgate; to the disgust of the most respectable members of that great trading community. It may well be imagined, how little deserving of attention are the views of a body so constituted; and, although they may talk largely of the evils of this or that system, and presume to offer dictatorial language, among others, upon this copper question, it may be affirmed, that there is no manufacturing district of the country, which has not, in proportion to the extent of its concerns, a larger interest in that particular subject than the people who thus force their opinions upon public notice. As to their assertion with respect to the effect produced upon "the manufacturing trade of that district," I must be excused for declining to take their dictum upon the subject for my guidance. I stated, in my preceding letter, that official returns upon this point will be shortly upon the table of the House of Commons. When these returns are presented, we shall learn the exact value of the opinions thus expressed by the Manchester Chamber of Commerce.

I have thus, at a length which, I fear, may prove inconvenient to you, gone through the pleas condensed by Sir C. Lemon out of his arguments of those would-be repealers. In their reply to the letter of the hon. baronet, the committee, although professing to deal with those pleas *seriatim*, ramble strangely into all sorts of desultory matter, involving many statements of figures, into which I have declined following them in this letter. I must again trouble you for space for further communication, in which I propose to deal distinctly with those statements; as well as by comparison with some other figures, touching our domestic interests, brought down to the close of last month; and which, I am strongly inclined to believe, will throw into the shade all the display made by the committee, in support of their own views.

London, July 17. Yours, &c., PUBLIUS.

[In my letter of the 9th inst., published in your journal of the 16th, there is an omission, which changes the whole course of the argument upon the particular point to which it refers. In the 8th line of the 5th paragraph, a quotation runs thus:—"I do not say that the duty upon copper ore will, necessarily, produce this effect. It should be—"I do not say that *the repeal of* the duty upon copper ores," &c.]

MINERALS OF KOORDISTAN.—Dr. O. P. Hubbard, professor of chemistry, Dartmouth College, in a communication to *Silliman's American Journal*, described some mines of lead, sulphur, and orpiment, which exist in the mountains, and are worked by the natives there. The lead mines are found mainly in the Nestorian country, where they are worked chiefly to furnish balls for rifles. Sulphur is found in many localities, and is obtained for the purpose of making powder. In many cases, a man makes what he wants for his own use, and may sell a little to his neighbours. The orpiment mine is owned by the chief of the Hakkary Koords, Noor Ali Khan. It is worked extensively, and has been for many years. About 20 Koords are employed, day and night, in digging the ore and bringing it out to the surface. The ore occurs in veins, which run in various directions, into the body of a high mountain. The mineral is exported to every part of Persia and Turkey, where it is largely used in making a composition with which Mussulmen remove the hair growing on their bodies, when frequenting the baths; for hair is an abomination to them, except on the face, and a lock or two on the head. Orpiment is also used by them as a pigment. Mr. J. D. Dana informs me he has purchased specimens of orpiment in Symrna, which were probably derived from this locality.

DIARRHŒA, OR BOWEL COMPLAINTS, CURED BY HOLLOWAY'S PILLS.—At this season of the year disordered bowels are most prevalent, caused, in many instances, by eating too freely of vegetables or fruit. Let those suffering from this complaint try Holloway's pills, which are of so strengthening a nature, that they quickly restore the impaired tone of the stomach, and permanently renovate the digestive organs. Bilie and diseased liver may be infallibly cured by their use; therefore, residents in the East or West Indies cannot have recourse to a more effectual remedy. As a family medicine it is unequalled, and may be safely used by both sexes at any age.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The (main) lode in the 18 fm. level end west has not been taken down since my last; the rise behind this end is worth 20*l.* per fm. In the 12 fm. level end west, the (middle) lode is improved—worth about 10*l.* per fm.; the western stope, under this level, is working much the same—worth about 12*l.* per fm.; the eastern stope, on ditto, is not looking so well. We shall resume sinking the winze under this level, on the middle lode, on Monday next; it is down about 6 fms., and we intend sinking it 4 fms. deeper, before we commence driving any level. We have discovered a good branch of ore on the north section of the lode, north of the 18 fm. level, taking down with a slight underlay south; it is near the slide, and, from its present appearance, will go down south with it. The *Joseph* arrived last night, to take a cargo of lead: I hope to get her away in a day or two.—THOMAS ANGOVE; GEORGE WHITE: July 30.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump-winze, in the 80 fm. level east, is 4½ ft. wide, and worth about 90*l.* per fm.; in this level east, the lode is 3 ft. wide, and worth 10*l.* per fm.; and in the stopes in the back of this level, the lode is worth 15*l.* per fm. The lode in the 70 fm. level east, is 2½ ft. wide—good work. The lode in the 58 fm. level east is still poor. There is no alteration of importance either at Liscombe or in the south engine-shaft and adit level. We weighed at Morwelham, on Friday last, June ores, 102 tons 3 cwts., and sampled July computed 104 tons 21 cwts.—J. PHILLIPS.

COATLITHE HILLS.—The level east from A shaft, has been driven about 8 ft. during this week. The vein is not quite so wide, but in other respects there has but a slight alteration taken place. The horse level has been driven 1 fm.—J. M. PAULL: July 31.

COOK'S KITCHEN.—At Chapple's lode, in the engine-shaft, the lode is large, and producing a little tin. In the 180 fm. level east, the part of the lode on which we are driving is 4 ft. wide, and worth about 10*l.* per fm.; in the same level west, we are still engaged in driving north through the lode, which is producing pretty good work. In the 170 fm. level east, the part of the lode on which we are driving is 4 ft. wide—worth 10*l.* per fm.; in the same level west, the part of the lode on which we are driving is 5 ft. wide, and worth about 24*l.* per fm. In the 92 fm. level, west of Eudy's lode, the lode is at present poor. On North Tincroft lode, the water has risen to the 70 fm. level, which prevents our continuing to drive it; but we shall continue our limited operations at a shallower level. On the Druid lode, we have cleared the adit to about the boundary between Tincroft and this mine, and shall clear the boundary shaft, which is about 5 fms. within our sett, in course of the ensuing week. Our tribute pitches are looking very well. We sent to the smelting-house on Friday (30th), 14 tons 15 cwt. 20 lbs. of tin, which brought 704*l.* 14s. 2d. We shall again send a good quantity in a week from this sale.—J. VIVIAN.

CUBERT.—We have this day held the public setting for August, and have set 11 pitches, varying from 2*l.* to 6*l.* per ton, employing 30 tributers; also six bargains, employing 28 men on tutwork. The ground in the engine-shaft appears to be a little more favourable for sinking; we have been able to reduce the price from 30*l.* to 25*l.* per fm. in the ends going east and west. In the 35 fm. level, the lode is 3 ft. wide, at present hard—spar, mundic, and lead, but not rich for the latter; we consider, however, in the back end the lode is very promising. In the 25 fm. level east (in Sir R. R. Vyvyan's lands), the lode is 2 ft. wide, worth about 7*l.* per fm. for lead. We find the great lode, which we have cut in cross-cutting at this level, to be split up into branches of spar and mundic, and not worth following; we have removed the same men to sink Henry shaft, below the 25 fm. level. The new shaft sinking to the west, in the Earl of Falmouth's land, is sunk from surface about 11 fms.; the ground there is very favourable.—R. ROWE.

DEAN PRIOR AND BUCKFASTLEIGH.—In the deep adit we have commenced driving north to prove the north part of the lode; price for driving, 3*l.* 10s. per fm. In the 10 fm. level we are still driving on the south part of the lode, which at present is poor, passing through slidy and broken ground; price for driving, 3*l.* per fm. In the 20, or bottom level, the lode has a very promising appearance, and is getting more settled; the indications, to a great extent in this level, are sufficient to convince any miner that in the deeper levels we may anticipate the most favourable results; price, 4*l.* per fm. Saturday being the monthly setting-day for August, two pitches were set in the back and bottom of the 10 fm. level, at 12s. in the 1*l.* We are making all the progress we can in preparing for fixing the grinder, and expect the castings will be ready in the course of next week; we are also getting on with the rings of the new water-wheel, &c.—H. CHOAKE: August 4.

DEVON AND COURTENAY CONSOLS.—The lode in the end, driving east at the 30 fm. level, on the south lode, is 2½ ft. wide, composed of mundic and peach, with branches of spar, containing occasional stones of ore; the lode in the end, driving west at the same level, is 18 in. wide, composed of killas and spar, and some very good stones of ore in small branches in the lode. In the deep adit level, on the south lode, the lode is at present small, but the ground appears to have a favourable change, the killas being more soft and white. In the shallow adit level, on the north lode, the lode is 2 ft. wide, composed of flookan, can, and mundic, and spots of lead ore. The shaftmen are continuing to sink; but, owing to the increase of water, I think it is become necessary to prepare another lift for sinking.—N. SECCOMBE: August 3.

EAST ALVENNEY.—We have commenced dressing tin this day, and I hope shortly to have to report that this mine is giving dividends.—JOHN SPARGO.

EAST CROWNDALE.—The ground in our engine-shaft is rather closer than it has been, having intersected some branches of spar, which has made the ground more difficult to sink; these branches contain mundic, peach, and good spots of yellow copper ore. In the adit level, at Rix Hill, the ground is not so good as it has been, having in the past week gone through several small branches of spar; the end is getting wet, which indicates we are near upon cutting the north lode. Our engine and pitwork all in good order.—S. PAULL: July 31.

EAST TAMAR CONSOLS.—We have commenced sinking Harrison's shaft under the 54 fm. level; the lode in the shaft is 2 ft. wide—a very kindly lode; the lode in the same level north, is 20 in. wide—fluor-spar and good stones of silver-lead ores; the lode in the same level south, is 18 in. wide, composed of fluor-spar and ore—good saving work. The lode in the 46 north, is 2 ft. wide—work of a coarse quality; the lode in the same level south is 20 in. wide—work of a good quality. The lode in the 38 south is 16 in. wide—a very good lode. Charlotte's is looking very promising.—B. ROBINS: Aug. 3.

ELBOROUGH.—The lode in the 16 fm. level, east of Vivian's shaft, is without any important alterations—still about 10 in. wide of flookan and spar; for the present stopped, until a whim is erected to drive the shaft. The lode in Vivian's shaft is from 4 to 5 ft. wide, carrying regular walls, and composed of good stones of barytes, impregnated with calamine and lead, and blue-coloured flookan, of a very promising appearance—ground favourable for sinking; set at 25s. per fm.; the stuff will be deposited into the large cavern discovered a short time since, instead of being drawn to surface, which will effect a great saving.—R. TREVITHICK: August 4.

GADAIR.—The end is not so hard for this last week as it has been. We have found a few stones of copper and lead, but they are not plentiful. The end at this time is composed of killas, spar, and sulphur, with a small quantity of copper, lead, iron, black jack, &c. In fact, it looks kindly at this time.—B. TUCKER: July 5.

GREAT MICHELL CONSOLS.—In the 35 fm. level, east of the engine-shaft, the lode is composed of spar, mundic, fluor, and stones of ore; in this level west, the lode is producing stones of ore, intermixed with mundic and spar. In the winze in the bottom of the 22, west of the shaft, the lode is producing good stones of ore.—T. RICHARDS: Aug. 3.

GREAT WHEAL MARTHA CONSOLS.—Since my last report we have driven 9 ft. west, in the 40, and find the horse of killas is nearly worn out, and the lode getting more compact, which is about 7 ft. big, chiefly composed of capel, spar, and mundic, spotted with ore. We have this day set the end to drive east, and expect to have about 10 fms. to drive before we get under that part of the 10 fm. level where we had the shoot of ore. The lode in the 20 fm. level, below this, is about 12 feet big—3 ft. of the southern part of which being mundic and copper, and the remaining part capel, intermixed with copper; we, therefore, may expect, when the end is driven the aforementioned distance, to have more favourable results. We soon expect a decrease of water at the 40, as the 10 and 20 fm. levels are now dry.—T. PENALUNA: July 30.

GUNNIS LAKE.—At Chilsworthy, the lode in Bailey's engine-shaft is 2 ft. wide, composed of gossan and spar, with a little ore in places—ground rather more favourable for sinking. In the 12 fm. level west, we have cut a branch, but intend driving a little further north, to ascertain if it is the main lode.—W. RICHARDS: Aug 3.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, continues about 2½ feet wide, producing stones of ore occasionally.—P. RICHARDS.

HEIGNSTON DOWN CONSOLS.—The lode in the 20 fm. level, east of Hitchins's (late of north) shaft, is 3½ ft. wide, composed principally of gossan, of the most promising description, with good stones of tin occasionally; in this level west the lode is 2½ ft. wide, composed of capel, spar, and tin, producing some saving work. We are progressing tolerably satisfactorily with the clearing of Buddle's adit. We intend resuming the sinking of Hitchins's shaft to-day.—W. RICHARDS: August 3.

HOLMBUSH.—The diagonal shaft is sunk 8 fms. 3 ft. below the 120 fm. level—the ground being still favourable; we have intersected within the last week another branch, in the north side of the shaft, nearly perpendicular, containing mundic, spar, and spots of ore; the lode in the 120 fm. level, west of the great cross-course, is 18 in. wide, composed of spar and stones of ore—much more kindly than it has been for some past to make another shoot of ore; the lode in the 120 fm. level, east of Hitchen's shaft, on the north part, is 10 in. wide, composed of mundic, spar, and spots of ore. The lode in the rise above the 110 fm. level south is 20 in. wide, composed of spar and stones, and small veins of lead; we purpose sinking a winze below the 110 fm. level, between the slide and lead lode, to get down as far as we can against the 120 fm. level; and shall have driven far enough west to make a communication, which will be very desirable for exploring the lead lode, and laying open tribute ground on the copper lode. The lode in the 100 fm. level south is 2 ft. wide, composed of spar, prian, and lead, worth 6*l.* per fm., and promising a further improvement; the pitches, in the back of this level, are still producing a fair quantity of lead. We weighed, at Calstock, on Friday last, June ores, 59 tons 1 cwt. 2 qrs., and sampled July ores, computed 64 tons.—W. LEAN.

ILAM.—Our taking-day was on Saturday; the bargains were set as follows:—Cross-cut driving from the bottom of Robins's shaft, 6*l.* 15s. per fm.; there is a little water coming from, and, if I am right, we are fast approaching, Brown's lode. The 42 fm. level is suspended for the present, and two of the men put in the 67 fm. level east of the shaft; this is a kindly lode; price for driving, 6*l.* 5s. per fm. I have set Robins's shaft to sink by several men; price, 7*l.* 10s.; no lode taken down since we commenced sinking.—JAMES SPRAGUE.

KIRKCUDBRIGHTSHIRE.—Since my last report, I regret to say, that we have been able to do but little in the bottom of Stewart's shaft and bottom end, and that little by aid of a shower on the night of the 27th. Arrangements are this day being made to bring home the additional stream contemplated from Mr. Mackie's property, and I hope by Tuesday night next all will be well, and we shall again be in a position to draw stuff. The 80 end west, and the 20 end west, are both looking well, I should say worth 10*l.* per fm. each; and the backs in the 20 west are also looking well. We have partially explored upon a joint, which we consider the caunter in this level, and think, from its appearance, that this lode reduces in character in the 20 fm level—hence our expectation in the 40 west.—J. BUZZO: July 31.

LEWIS.—The lode in the 60 east is 6 ft. wide, worth 15*l.* per fm. for tin—a very pretty lode; and, from its appearance, I think we shall have to give a higher valuation of it next week; the lode in the 60 west is much the same as last reported. The lode in the 50 east is 4 ft. wide, worth 8*l.* per fm. for tin—very promising; the lode in the 50 east, on south branch, is 1 ft. wide, worth 10*l.* per fm. for tin. The lode in the 40 east is 18 in. wide, producing tin that will equal the cost of driving. I think our prospects are better to-day than I have seen them since the commencement of the mine. Capt. Paul has been here this day, and will give you every information respecting the tribute ground suspended.—S. S. NOELL: July 31.

SOUTH FRIENDSHIP WHEAL ANNE.—We have dropped our lift within a few feet of the bottom of the mine, which is the 52 fm. level. The shaftmen are employed in taking up some very useful timber, which was left by the old company, whose operations, in the lower levels of this mine, were, it appears, put a stop to, in consequence of their not being able to keep the water; and which also accounts for their leaving useful and saleable timber in these levels. In forking the water to the present depth, we have obtained some important indications as to the continuation of the lode, in an uninterrupted form and character, into the Wheal Anne sett. The shaft in the Wheal Anne sett is upwards of 100 fms. east of the South Friendship shaft; and it was the prevailing opinion, that a channel of hard ground, or very extensive cross-courses, intervened between these two shafts. We now find that forking the water in the South Friendship shaft (although upwards of 100 fms. distant) has already drained the Wheal Anne shaft upwards of 12 fms. below the adit. The old adit, also in Wheal Anne, near the stile, where there was a great flow of water, is quite dry; we have sunk on the course of the lode, and are breaking most excellent stones of copper. From these facts, we are led to infer that the lode is large, and of an open character throughout the length and to the depth to which it is proved by the operations on the South Friendship side, and by the effects perceivable on the Wheal Anne side. We shall clear up the mine in a few days, when the levels will be more fully inspected and reported on.—JOHN SPARGO.

SOUTH TAMAR UNITED.—The plunger-lift is fixed, and the water is forked to the 50 fm. level. The men are busily engaged in putting in timber for dividing and casing the shaft, and putting in footway. The men in the adit are getting on in clearing and securing the levels very satisfactorily.—B. ROBINS: August 3.

SOUTH WHEAL TRELAWNEY.—The shaftmen have sunk 1 fm. 4 ft. 3 in. this month, besides cutting ground and fixing cistern, dividing and casing down the shaft, fixing house-lift, stays, &c. The ground in the shaft is still as favourable as we can wish to see it, and stands without being timbered; we have set it to sink for 12*l.* per fm.—extent for the month.—W. LEAN.

TAMAR SILVER-LEAD.—The engine-shaft is sunk 5 ft. below the 170 fm. level. In the 160 end south the lode is 2 ft. wide, composed of spar and ore, saving work; in the same level north the lode is 18 in. wide, good saving work. In the 145 end south the lode is small and poor; in the north end, same level, the lode is 3 ft. wide, very good work. In the 135 end the lode is 1 ft. wide, composed of flookan and mundic, with a small quantity of ore. In the 125 fm. level the lode is 2½ ft. wide, intermixed with capel and ore, very good work. At the north mine, in the 70 fm. level, we are cross-cutting east to intersect the main part of the lode, as we find it to be split in two branches. In the 60 end the lode is 3 ft. wide, carrying some good branches of ore. We hope to sample, on Thursday, the 5th inst., from 90 to 95 tons of rich silver-lead ores.—JAMES SPRAGUE: Aug. 5.

TINCROFT.—The lode in the 100, east from new engine-shaft, is 15 in. wide, producing some ore, and kindly; the west end, in the same level, has improved since last report—now worth about 10*l.* per fm. The lode in the 90 east is 3½ ft. wide, producing some good quality ore; in the west, in the same level, the lode is 12 in. wide, good ore, and very promising. The lode in the 80 east is 2½ ft. wide, worth about 15*l.* per fm. for tin; the 80 west is worth 20*l.* per fm. for copper. The 70 east is producing a small quantity of tin. The 60 west is at present unproductive. The lode in the 50 west is at present unproductive; the lode in the 50 west is 2 ft. wide, worth 12*l.* per fm. At Palmer's, the 80 west is producing a small quantity of ore. The 70 west is also producing ore, and very promising. The lode in the winze, in the bottom of the 60, is 3 ft. wide, producing 1 ton of ore per fm. Our pitches continue to produce fair quality ores. The different levels in the south mine continue to produce fair quality tinstuff, and some of the pitches have very much improved. We continue to do well on Chapple's lode. At Wheal Providence, we have nearly completed the clearing and securing the adit, and shall very soon be forking the water below the adit. We have erected a horse-whim on Clinton's shaft, and set one pitch, in the back of the adit, to four men, at 10s. tribute. On the whole, I consider our prospects to be good.—W. PAUL: Aug. 2.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christoe's, the lode is 20 inches wide, with a great improvement in its appearance, but not much mineral. In the winze, below the 100 fm. level east, the lode is 18 in. wide, worth 7*l.* per fm.; in the 100 cross-cut, north of Garden's, the ground is more favourable, but we have not yet cut the lode; a part of the late party of men will be casing a shaft, and cutting a plat, in the 100. In the rise, above the 90 west, the lode is 18 in. wide, worth 10*l.* per fm. In the 80, east of Garden's, the branch lode is 20 in. wide, worth 15*l.* per fm. on the south branch; in the winze, below the 80 west, we shall drive the 80 end for a few days, until the water in the winze is drained by the rise from the 90 fm. level—the lode is 20 in. wide, worth 10*l.* per fm. In the 70, west of ditto, the lode is 1 ft. wide, but little mineral. In the 60, west of ditto, the lode is 4 ft. wide, composed of spar, mundic, and stones of ore. In the adit end east, on Wheal Parent lode, the lode is 2 ft. wide, producing stones of ore, only not to value. East shaft, on Wheal Parent lode, is to be sunk below the adit level, on the course of the lode; it is orey, but I cannot give its value in this report.—W. SYMONS: July 30.

UNITED HILLS.—In the 90 fm. level, eastern end, the lode is 2½ ft. wide, worth 6*l.* per fm.; in the western end the lode is 3½ ft. wide, worth 10*l.* per fm.; in the stopes the lode is 2½ ft. wide, worth 25*l.* per fm. In the 80 fm. level, eastern end, the lode is 3 ft. wide, worth 12*l.* per fm.; west of cross-cut the lode is 18 in. wide, worth 14*l.* per fm. In the 70 fm. level the lode is 2½ ft., worth 8*l.* per fm.; in the eastern shaft the lode is 3 ft. wide, worth 8*l.* per fm. The 60 fm. level has been suspended since August last; the shallow adit was suspended last month. At Wheal Charles, in the 50 fm. level, the lode is 2½ ft. wide, poor. At Wheal Sparrow, in the 40 fm. level, the lode is 18 in. wide, worth 3*l.* per fm. In the 30 fm. level the lode is 15 in. wide, producing but little ore; in the eastern end, on Stacey's lode, the lode is 2 ft. wide, worth 15*l.* per fm. In the 20 fm. level the lode is small and poor; in the adit level the lode is 18 in. wide, producing some stones of ore.—THOMAS TREVENEN; ROBERT WILLIAMS: August 6.

WHEAL REYNARD.—With this, I send you the last monthly report of Wheal Reynard Tin and Copper Mine, near Plympton. The north lode is supposed to be a copper one—in the sloding pits it was over 13 ft. wide; there are also several other lodes in the sett, from one of which, in bringing up the adit, was taken a large quantity of mundic, with spots of copper, only 4 fms. from surface; and there is also another large gossan lode in the very mouth of the adit.—The following is the report from the purser, Mr. R. Williams, jun., dated July 27:—Since our meeting of adventurers, on the 26th June last, we have driven on the tin lode 10 fms.—making the total distance driven on this lode about 21 fms.; throughout this drivage, with the exception of about 4 fms. (which was disordered by a cross-course), we have had a lode of fair quality for tin—its average width is about 2 ft. I am of opinion, that, when this lode is seen 10 fms. deeper, we shall raise a great quantity of tin; the present depth is about 11 fms. The cross-cut north is driven from the shaft about 20 fms., and is going on very favourable; the price paid per fathom is 10s., and no more will be paid until it is driven 35 fms. north of the shaft, if required (as per contract); at, or about, this point we fully expect to intersect the north lode, which is of great promise. The ground through which we are driving is of a very congenial nature—viz., a beautiful soft clay slate, with a quantity of soft mundic and spar. If our present favourable ground continues, we shall see the north lode in three weeks from this date, when I hope to have something good from this point to communicate.

WEST WHEAL JEWEL.—The sumpmen are put to rise in the back of the 70 fm. level, on Williams's cross-course, to drive east over a pitch in the back of this level, where the tributers have a good lode of ore. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, lode 16 in. wide, worth 7*l.* per fm. In the 12 fm. level, west of Quarry shaft, on the same lode, lode 15 in. wide, worth 9*l.* per fm.; in the stopes, east of Quarry shaft, on same lode, lode 8 ft. wide, worth 15*l.* per fm.; in the stopes in the back of this level, on the same lode, lode 2 ft. wide, worth 13*l.* per fm. In the adit end, west of Quarry shaft, on the same lode, lode 15 in. wide, worth 6*l.* per fm. In the stopes, in the bottom of the adit, east of Pryor's winze, on same lode, lode 2 ft. wide, worth 18*l.* per fm. In the 12 fm. level, east of Reeves's winze, on the same lode, lode 6 in. wide, unproductive.—R. JOHNS; T. BRAY: Aug. 2.

WEST WHEAL MARIA.—The lode in the 38 fm. level, west of eastern engine-shaft, is about 3½ ft. wide, producing good stones of ore; the lode in the western engine-shaft is about 3 ft. wide, producing spots of ore occasionally. In the 54 fm. level, east of this shaft, the lode is about 2 ft. wide, with good spots of ore in places; in the cross-cut south, in this level, there is no important alteration.—T. RODDA: Aug. 3.

WEST WHEAL ROUGH TOR.—We are sinking the engine-shaft in the north part of the lode for about 6 ft. in width, composed of gossan and spar—the shaft is now 7½ fms. below the surface.—T. RICHARDS; Aug. 3.

WHEAL ADAMS.—We find the ground so soft, and such large quantities of water issuing from the western silver-lead lode in the 50, that we consider it best to leave this part for the present, and to extend the level south on, or contiguous to, the western lode—say about 10 fms.—and then cross-cut west, which would drain the back ground, and thus enable us to explore the lode with greater dispatch, and with three-fourths less timber. The lode in the winze, sinking in the 40 fm. level, is 2 ft. wide—for the first 3 ft. it produced but little ore; it now wears a more promising appearance, producing about half a ton of lead ore a fm. The lode in the 40 fm. level south is 4 ft. wide, consisting of friable quartz and granular galena—a promising lode, with large quantities of water issuing from it strongly mineralized. The lode in the 28 fm. level, extending south, continues hard and poor. The cross-cut, in the north part of the mine, is suspended driving for the reasons assigned in our last report, and we are extending a level on the course of the eastern lode, which, although not at present rich, has a promising appearance, and we doubt not but that it will be soon found productive—this level was, some two or three years ago, extended south from the old engine-shaft on the jack lode, the eastern lode not having been cut through, or seen for a length of upwards of 30 fms.; the intermediate rock being soft, we considered it expedient to make a cross drift, which we have done during the week, and have intersected the lode, which is 18 in. wide, producing good stones of lead, worth 6*l.* per fm.—price for driving, 45s. per fm. We consider this to be an important point in the concern, inasmuch as the 28 and 40 fm. levels have also been extended on the jack lode only. The 40, between the two shafts, is, as you are aware, filled with water, owing to an error in surveying—we propose stoping the back of this level as soon as possible, in order to bring the water from the old to the new engine-shaft, and to cross-cut the eastern lode, as we have done in the 28 fm. level. The last parcel of lead ores weighed 39 tons 10 cwts. 2 qrs. dry, and was shipped on board of the *Dispatch* on Friday last.—J. PRISCE: Aug. 3.

WHEAL BARBARA.—Since my last report, we have witnessed but little change in the ground. We have an increase of water, and find that the lode does not underlay so fast as we anticipated—consequently, we shall have a fathom or two more to sink than was calculated upon. This I am pleased with, as I would rather cut it at 15 fms. below adit than at the 10; but I still think we shall meet with the lode before we arrive at the 10 fm. level; and my opinion of the success in cutting it, and the ulterior result, has been laid before you more than once; and I meet with nothing but what strengthens that idea.—H. F. STEPHENS: August 2.

WHEAL MARY ANN.—The lode in the 30 fm. level, south of Barrett's shaft, is 3 ft. wide, and worth 15*l.* per fm. The lode in the 15 fm. level south is 2 ft. wide, and worth 7*l.* per fm. All the stopes are looking well. Pollard's shaft is sunk 8½ fms. under the adit level.—PETER CLYMO, Jun.

WHEAL TRESCOLL (TIN).—This sett, from whence were taken those large and rich stones of tin, that have for these past few weeks been exhibited at my office, I have now completed a careful survey of; and am happy to say, the reports previously received from the various mining agents are not in the least exaggerated. The plan represents 17 lodes and branches, but 1 find, by close inspection, there are a great many more than that number; and so fair are the whole of them, that there are but few that will not carry tin. At the mouth of the old adit I have opened on a lode, the produce of which I have had stamped down and dressed; it will make above 8 cwts. per 100 sacks; and close to the surface, there are about 18 strong branches in the adit, which is about 20 fms. in length, and which can be set on tribute, and make returns the first day the mine goes to work. I propose to bring in a new adit 3 fms. below the present one, which will drain all the old workings, and intersect the great lode at the point where it was cut so rich by the old miners; we shall continue driving the adit in a north-westerly direction across the whole sett, by which means I expect to cut all the lodes, and thus be able to decide the locality for the engine; while this is progressing, we shall be driving east and west on the two first main lodes, and, according to my calculation, the returns at those points alone will more than pay costs for the whole; I have raised ore from the lodes in several other places, and, in every instance, find them sufficiently good to pay well for working: altogether, the sett, which comprises about 800 acres, will form one of the first speculations in this part of the county of Cornwall.—C. S. RICHARDSON.

WHEAL TRELAWNEY.—The lode in the 42 fm. level, north of Phillips's shaft, is 4 ft. wide, and worth 20*l.* per fm.; the lode in the same level south is 2½ ft. wide, and worth 15*l.* per fm. The lode in the 32 fm. level north is 2 ft. wide, and worth 12*l.* per fm. All the stopes are looking well. We have finished cutting the plat in the 52 fm. level, Phillips's shaft, and extended the cross-cut 3½ fms. towards the lode. Trelawney's shaft is sunk 14½ fms. under the 22 fm. level. The lode in the 20 fm. level, Vivian's shaft, is 4½ ft. wide, and is composed of gossan, with fine stones of lead; the lode explored in this level is worth 12*l.* per fm.; we have also commenced sinking this shaft under the 20 fm. level. We sold on Saturday last a parcel of lead ores, computed 80 tons, to Messrs. Walker, Parker, and Co., at 14*l.* 3s. 6d. per ton.—P. CLYMO, Jun.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

COOMBE LAWN.—No material alteration has taken place for the last fortnight; the lode in the deep adit level is still very large, and produces a small quantity of rich silver-lead ore, and blende. The engine-shaft is about 4 fms. below the 10 fm. level, ground easy for sinking, beautiful droppers, or branches of lead, and iron pyrits, dipping in a north-westerly direction towards the lode—favourable indications.

GWINEAR CONSOLS is looking remarkably well—the sampling is 90 tons, and I am of opinion that no call will be required for the erection of the contemplated engine, &c.

— Is looking very well in both east and west ends, on the new discovery, and the next sampling is likely to prove its value; the east end is 3 ft. wide, all going to pile as broken.

HERODSFOOT has considerably improved in the bottom level; the lode, when first cut into, was very good, but both ends continue to improve as they advance.

— The lode in the 82 is the best ever seen in this mine.

LODDESWELL MINE (near Kingsbridge, Devon).—They have sold 18 tons of ore, worth 30*l.* per ton; about 3 tons more at surface, preparing for the market. The mine is 14 fms. deep, and we have just commenced sinking under that level; the lodes are large, and of kindly appearance in going down; being many lodes they appear to be forming a junction, and are composed of a beautiful white quartz, barytes, flookan, prian, and grey copper, rich for silver—some assays have brought as much as 400 ozs. of silver to the ton of ore.

MARKE VALLEY.—They have a good lode in the 65 fm. level, going under the ore discovered in the 50 some time since; the lode is worth 50*l.* per fm.

WEST WHEAL BASSET.—The prospects at this mine have greatly improved.

WHEAL YEOLAND.—The abatement of the water has enabled us to commence sinking on the tin lode. A meeting of the shareholders was held last week, when a most satisfactory report was made by the captain, and the erection of a steam-engine determined on, and a committee of gentlemen appointed to carry the same into effect. The call necessary for that purpose was immediately made, and which I have paid.

At TRELAWNEY, the lode in the northern ground is worth 12*l.* per fm. There is already a fine heap of ore here.

At TRESKAWE, the prospects continue good—600*l.* worth of ore dressed.

The shares in the Merionethshire Slate and Slate Slab Company have, within the last few weeks, appeared in the market under the most favourable circumstances. A clear dividend, at the rate of 5*l.* per cent. per annum, has been declared, and now in course of payment. It is, likewise, most fully anticipated, from the late reports of the present successful workings of the quarries, that a much larger dividend will be made at the next half-yearly meeting. The shares, we are informed, are strongly held, and have only exchanged hands, since our last quotation, at ⅜ to ½ per cent. higher than last week's mark.

ALTEN MINING ASSOCIATION.—A satisfactory report has this week been received from the Alten Mines, which shows a considerable increase in the monthly produce, and holds out good expectation of still further improvement.

PRICES OF MATERIALS CHARGED AT THE NORTH UNITED MINES IN MAY:—Common iron, 10s. per cwt.; gad steel, 30s. per cwt.; leather, 1s. 9d. per lb.; coal, 18s. 9d. per ton; best London candles, 6s. 2d. per doz. lbs.; tallow, 54s. 6d. per cwt.; gunpowder, 38s. per cwt.; safety fuse, 4d. per coil.

FOREIGN MINES.

ALTEN MINES.—The following is the estimated produce for June:—

Mines.	No. of men.	Tons ore.	Per ct.	Tons copper.
Raipas	28	10	5½	4·40
United Mines	20	80	5	4·00
Ryper's	8	15	5	0·75
Mancur's	4	5	5	0·25
Michell's	8	10	6	0·60
Old Mine	10	14	7	0·98
Wilson's	4	5	8	0·40
Powder House	2	1½	5	0·07
New Lodes	2	1½	6	0·17
Quænvig	2	2	4	0·08
Total	88	214		11·60

Mining Report, from the 24th June to 14th July.

Raipas.—The exploratory workings recommenced at the surface, have latterly been prosecuted with fair success, and the prospects have improved. Labouchere's continues good, but the produce, on the whole, is still fluctuating. Carr's is at present making some valuable returns, and again holds out greater hopes of permanency. The large masses of ice formed in the mine during the past winter, still prevents us from resuming the stopes in the 5 fm. workings, but we hope the summer (which as yet has scarcely commenced) will shortly enable us to do so. The carriage-road from Raipas to Bossikop, has been repaired, and the transport of the ores to the smelting-hous has subsequently progressed favourably. The usual summer work at the surface is now in full operation, and we have every reason to anticipate a favourable result.

United Mines.—The loose ground is again secured, and the railroad in the 40 fm. level has been thoroughly repaired. The impediment to our usual mining operations, from the land-slip alluded to in my last report, has been very temporary; and, with every inconvenience, we have still, by means of our stock of halvans, been able to materially increase the returns of ore. The prospects of the stopes on Ward's lode, continue promising; and we hope no further obstacles will arise to impede the favourable progress we have hitherto made.

Ryper's.—Within the last fortnight, two discoveries have been made at the surface of this mine; which, although but partially developed, may still be looked on as an important acquisition. Two new lodes have been found; one of which is a short distance from the old mine, towards the south-east—is only 4 in. wide, but being composed of solid prills, will well remunerate the cost of working. The other, about 300 yards towards the north-east, is about 18 in. wide; it possesses at present a regular and permanent appearance, and yields remunerative returns. The stopes suspended during the thaw, have been resumed. The lode has increased in size, and the prospects are equally favourable, although the produce is still below the usual average of this mine.

Mancur's.—An improvement is also visible here; but in consequence of the confined nature of our operations, it will not have the immediate effect of increasing the returns in any sensible degree.

Michell's.—The several workings are as last reported; no improvement can yet be noted.

Cole's.—Next week we hope to be able to pump the water out of the workings, and shall immediately afterwards resume the tribute pitches set two months ago.

Old Mine.—The work performed by the tributers is highly satisfactory, and will, undoubtedly, prove reciprocally advantageous to them and the proprietors.

Wilson's.—Some small, but profitable, returns continue to be made from the numerous small lodes found at the surface. The tributers continue to explore other parts of the mine with great spirit, and hitherto with well-merited success.

Carl Johan's and Powder-House Lodes are at present unwrought, in consequence of a scarcity of hands.

Quænvig.—The work performed by the two men employed here, although trifling, has still been remunerative. This mine will now be suspended for a short time, for the purpose of making a further trial on Didliff's lode, on the opposite side of the fjord.

New Lodes.—The workings between Mancur's and Ryper's have been resumed, but as yet without making any material addition to our returns.

Ore-Dressing.—This department continues to make favourable progress, and some fair returns of good fluxible ores have already been sent to the smelting-house.—S. H. Thomas.

Alten Report.—I enclose you the summary of the ores broken at the mine in June, also the settings at Raipas for July month, 1847. The following is a brief outline of the different workings now in progress, with the present prospects in view:—In Daniel Christonson and partners' level, in the 10 fm. workings, the lode is about 2 ft. in size, containing gossan and purple ores, and producing about 2½ tons per fm., as well as leaving in its progress some good reserves in the roof; it will be observed, that this level is being driven in a south-west, instead of a north-east, direction, as was hitherto the case. In Johan Guth and partners' stope, on Labouchere's, the lode still continues in a disordered state, though, at the same time, containing some rich purple ores, and producing about 4 tons ore per fm. In Hendrick Kurruh and partners' roof stope, above Labouchere's, the lode is about 5 ft. in size, containing rich purple ores, with a large quantity of gossan, and wearing at this present time a most brilliant appearance; though one does not like to be too sanguine as to how long it is likely to continue in its present aspect, on account of its sudden changes, which the ground so frequently undergoes in the course of a few days only; it is, however, at this present time, producing upwards of 6 tons of ore per fm. In Johan Petterhenki and partners' side stope, on Carr's, the lode still continues to improve, as also to develope itself—it being actually at this present time nearly 8 ft. in size, containing rich purple ores, and wearing altogether a most splendid aspect, and producing upwards of 7 tons of ore per fm.; the ground is rather hard, which is retarding the progress of the mine very considerably. In Eric Ludberg and partners' stope, in the shallow adit workings, the lode is at present wearing a very kindly appearance, containing purple and yellow ores intermixed, and producing about 4 tons of ore per fm. In Arne Wolsen and partners' stope, at the surface, we have at present a very good bunch of green and purple ores, which is being turned to good account. I beg to remark, that we have still two stopes in the mine laying idle this month, and which I am inclined to think will continue so throughout the summer, which is solely to be attributed to the surface workings, as well as to the dressing of the ores and the driving, which is of far more importance, on account of the summer being so short, and which, at this present time, is engrossing no small share of our attention. I expect to get driven from the mine, by the close of this month, about 160 tons of second dredge; and, should not unforseen obstacles present themselves, you may fully rely upon receiving a cargo of best dredge into the bargain.—Samuel Monk.

BOLANOS MINES.—*June* 17.—El Bote Mine.—Since my last communication to you, I beg to inform you, that our exertions to forward the works of this negotiation have not relaxed. In San Genaro shaft the ground continues very favourable, having sunk 12½ varas during the month. The total depth of the shaft, to this date, is 112 varas, and we propose to drive a cross-cut from this shaft, at the depth of 115 varas, which will cut the vein about 40 varas above the level of Guadalupe; and, by so doing, we shall not only be proving the vein in this level, but be opening ground, and forming workings for the extraction of ores, by the time we have the communication with Guadalupe level, and also secure ventilation to this part of the mine. In the cross-cut de la Campana, from San Fernando shaft, we are progressing as fast as the nature of the ground, and the quantity of water we have to contend with, will allow us. In this cross-cut we propose to drive about 8 varas, and to make a plieta (basin) in the bottom to receive the coming water, prior to our again sinking the shaft. In Guadalupe level east the vein, I am pleased to say, has much improved—the productive part being about 3 varas wide, with ore of tolerably good ley. At the back of this level, and near the present end, a rise has been commenced, to test the character of the vein above this point. In Guadalupe west the vein has also improved during the month, being full 3 varas wide, with ore of fair quality: in the rise, on the back of this level, the vein is rather narrow and disordered. The Pozo de Guia, and Plana 1 and 2, continue in very good ore, and the vein maintains its usual width, about 10 varas. In San Antonio level west the vein has much improved—the productive part being about 5 varas wide, of ore of very good ley. The end above also continues in good ore. In Concordia west (contrary to expectations), I am sorry to say, no improvement has taken place.

San Francisco de Paula Mine.—The strings of ore have become narrower as we deepen the workings below the third level, and have disappeared altogether in the fourth cross-cut, where we have passed through the ground where the first and second veins should have been cut, and have found nothing, and have penetrated some 7 varas into the third or Rayas lode. This Rayas lode, of which the smaller veins appear to be branches, has been examined at various depths, and has hitherto produced no ores. In the fourth cross-cut, as far as we have seen, it is still barren; but there is a change in the nature of the ironstone, which, I think, would indicate the necessity of examining it at a still greater depth. We have the colorados down as far as the third level. In the fourth cross-cut the quarts has become harder, and of an amethyst colour, and takes the character of "Negro," which is considered a favourable indication. Eastward and westward, in all the ends, there is little to encourage a hope of improvement; therefore, after communicating the footway with the fourth cross-cut, it may be advisable to reduce our operations to a few exploratory works—such as deepening the shaft, until it cuts the main lode at about 40 varas below the fourth cross-course, and, perhaps, two ends east and west, and extending further some one of the cross-cuts to the south, to explore the country at the back of the Rayas lode, in search of other veins (or branches) which have been productive further to the east.

Celestina Mine.—The improvement has been very considerable in this mine since the beginning of June. The produce of ore has exceeded that of any former period (which may be attributed, in part, to the larger share of the ore given to the buscones at the end of April); but the quality is somewhat inferior to that it was yielding at the beginning of the present year. At the end of the 64 vara level we also find some small quantities of ore, which lead us to hope that, as we advance northward, the ore may extend to a greater depth than it has hitherto done.

Statement showing the General Results of the Mines and Haciendas in the Zacatecas District in May, 1847:—

Mines.	Loss.
San Rafael (San Francisco de Paula)	$3948 2 1
La Celestina	2283 5 0
Loreto	25 0 0
	$6256 7 1
Hacienda profit	$1295 2 6
Deficiency	$4961 4 3

El Bote Mine—ores raised in May, 15,379 cargas; profit, $17,810 6 6.

COPIAPO MINES.—*Report for April.*—In reporting the operations, produce, and prospects of the company's mines, I have pleasure in stating that Checo Mine presents a more cheering appearance that for years past, and I am confident will continue to improve if worked in a spirited, and at the same time prudent, manner. In the 15 fm. level east, on the north vein, referred to in my last, continues good; we have driven through it 3 fms. in the last month, which has produced about 10 tons of very rich ore; the lode is 2 ft. wide, 15 in. of which is worth 30 per cent. of copper; this is the more encouraging every fathom, because it is going into new and virgin ground, and leaving good stopes both in the back and bottom for a future day. We have also an improvement in the 20 fm. level, east of Harmas' shaft, which promises, from its present appearance, to yield several tons of very good ore monthly for a considerable time; the vein is large, 4 ft. wide, 2 ft. of which is ore of 30 per cent., but both the lode and the ground about it are hard. The stopes to the east of the Victoria shaft are still yielding good ore, and in fair quantities, as the produce below will show. The winze sinking at the west end of the mine still exhibits a very pretty appearance—lode large, and spotted with rich ore; but we cannot, as you are aware, make much progress with one barretero, where we have to carry the whole of the vein, varying from 4 to 6 ft. wide: however, I cannot leave this without taking the liberty to recommend your perseverance in the sinking of this winze, and exploring further west, by driving a level, when about 10 fms. deep, as I am very confident in my mind, that you will be amply remunerated for the outlay.

San Pedro Copper Mine—The prospects here are not altogether so cheering as when I last addressed you; we have found the vein that had been heaved out of the shaft, but not so wide or rich as we anticipated; still as we advance into settled ground a little further distant from the slide, we believe it will again improve. The 24 fm. level west is still producing some good ore—the lode is narrow, only 6 in. wide, and the ground at present hard; but I have not the least doubt, that the ground will become softer again, and the vein soon be found wider and richer than at present. The lode in the 15 fm. level is also small, about 6 in. wide, but the ore is very good; I believe this level will ere long be found as productive as ever. The stopes in the back of the 24 fm. level are looking pretty well—the ore is good, but the vein is too narrow to yield a large produce. In the winze, sinking from the 15 to the 24 fm. level, the vein is still rich, and about 8 in. wide—this will also leave good ground for stopes. Although the general prospects of this mine are not so flattering as a month since, I see nothing discouraging; for in the last 12 months I have many times seen it far less cheering than at present—besides, the prospects of Checo have improved more than this level has declined.

Pampa Larga Silver Mine.—But few instances have come under my notice, wherein the appearances of a vein have been so deceptive as in the last month in this mine; and that not in one or two instances, but almost generally. The two most important points I shall refer to first, where I think no one could have anticipated such a change—viz., the two 20 fm. levels on the arsenical lode, that we have recently started from Carvallo's shaft. In my last, I informed you that we had broken down about a vara in length on the vein going west, from which we had taken out about a ton of good cochize ore, and 10 cwts. of arsenical ore, mixed with cochizo, and exhibiting some spots of ruby silver—that the vein in the eastern end had not been broken down, but should do so in a few days, which we anticipated would turn out well; but our hopes have been greatly blasted, so illusive, at times, are the most flattering appearances. From this piece of lode we expected several tons of rich ore, and you may imagine better than I can tell you, what our disappointment has been, on finding only a few quintals before the ore was cut out. The lode still continues its size, and may as suddenly become rich again, but for the present it contains little else but spar, spotted with arsenic and antimony. The 20 fm. level west is also become poor, and that very unexpectedly. I confess my mind was not prepared to meet this unlooked-for alteration, especially where I had expected to find a good supply of ore for many months, and to have left the mine in a very productive state. The stopes in the back of the 30 fm. level, where we had a beautiful lode when we commenced stoping, have of a sudden also become poor, only yielding a few quintals, where we expected to break out several tons a month for a long time; and this would appear a reasonable calculation, having a good and a large vein in the 20 fm. level; and in the back of the 30 fm. level, which is immediately below it, a beautiful rich vein. Now, with these prospects open to you, who could but calculate that this 10 fms. of ground, with good ore almost all round it, would yield a good supply for many months? But such is the case, unaccountable as it may appear; but I believe, by perseverance, the owners will yet be amply remunerated—and, although these levels and stopes exhibit such a different appearance from what they did a month since, they will still yield a great deal of ore. In the bottom level east, we have a lode 3 ft. wide, composed of spar and antimony, with some good spots of ore; this will surely lead to something good. We are sinking a winze below the 30 fm. level, and have a pretty vein, about a foot wide, producing some good spots of ore, but not yet much that can be selected for cancha. We have nothing new on either the main vein, or that of the Estaca del Rey: but I do sincerely believe, that what we have done, and are still doing, is not only what practical English miners would recommend, but what the best native miners fully approve of; and, while I deeply regret this most unfortunate change that has taken place just now on my leaving your employ, I beg to assure you, that it will afford me unbounded pleasure to learn at any time that the company's affairs here—especially the mines—are in a prosperous and flourishing condition.

Produce at the Lever Mine in April, 10 tons of silver ore.

Produce at Checo in April, 51 tons; San Pedro, 50 tons—total, 101 tons.

NATIONAL BRAZILIAN MINES.—*Cocaes, 3d and 13th May.*—The principal part of the force has been employed in excavating at Oxenford's stopes, in the most eastern part of the mine. These stopes have never had so promising an appearance as at the present time. Our prospects at this part of the mine are considerable.

	Mks.	ons.	oits.	grs.
Produce from Cocaes	18	0	7	24
Ditto from Cuiaba	4	5	6	31
For 16 days	22	6	5	37

PACHUCA MINES.—*June* 28.—In the San Guillermo and San Pedro shafts, the veins continue large, and produce occasional stones of ore, but not in sufficient quantity to make it of much value. I trust, however, at a greater depth, we shall find an improvement. The expenditure in May (five weeks) amounted to $940.

REAL DEL MONTE MINES.—*Mineral del Monte, June* 28.—In San Andres level and San Guillermo winze, near Dolores, the vein is 1½ vara wide, of azogue ore, with a small branch of smelting ore to the north of winze. The San Pablo winze, I regret to state, is poor; and, in the stopes west of it, the branch of smelting ore is only from 8 to 9 inches wide; these and San Enrique workings produced in the last four weeks 82 cargas of smelting ore, assaying from 50 to 55 marcs per monton; and 545 cargas of azogue, of 13 marcs. In a cross-cut driven south, near the bottom of the winze, we have discovered some branches, nearly perpendicular, containing good ore, and which will fall in with the main part, at a few varas deeper, from which we are led to hope for an improvement. The workings on the Tapona vein, at the 157 vara upper level, continue productive of azogue ore, which, if necessary, can be increased according to circumstances. The present raisings are confined to 500 cargas per week. I remarked in my last that the increase of water in San Pablo winze, came, probably, from Terreros, which has since proved to be the case, it having lowered in the latter 8 varas below the Aviadero, and is still sinking at the rate of 2 varas per week.

Acosta.—The alteration in the pitwork, described in Capt. Skinfill's report, is nearly completed, and the driving the San Enrique end east resumed. The importance of expediting this work has, of late, much increased, as the future supply of smelting ore from this district may be expected chiefly from the workings below the Aviadero level, which are at present interrupted by the water, but will be drained when the San Enrique end reaches the Santa Brigida. You will have noticed, in my former letters, some remarks on the kindly appearances of the Acosta vein, in the Aviadero level, east of Santa Brigida. About three weeks since, we commenced sinking this place; and it is satisfactory to state, that the lode has improved in the winze called La Virgin. It is now 3½ varas deep, containing a branch of smelting ore, half a vara wide—the ley of which averages from 50 to 60 mcs. per monton. The appearance is very promising; and were it drained, 70 or 80 cargas could be raised weekly. We have also commenced sinking below the Aviadero, on the Santa Brigida vein, about 154 varas south of Acosta, where there is a branch of smelting ore, about a foot wide, assaying 100 mcs. per monton; in the latter, which is also about four varas deep, there is not much water; but as it is situated only 30 varas south of the vug, in which we can drop 36 varas in clear water, I fear we shall not be able to follow it down far, until the San Enrique end, as before stated, reaches this (the Santa Brigida) vein.

Sanches.—You will have observed, by my letter of 28th April, that the fiena at this hacienda, for the erection of additional barrels, was suspended, in consequence of the scarcity of quicksilver, and the impossibility at that time of procuring a supply. In the beginning of last month, however, when I learnt that it could be obtained at Tampico, I immediately resumed the works, and a strong force has since been employed on them, with a view to their completion with as little delay as possible; and I hope to have the satisfaction of informing you, by the next packet, that the 12 additional barrels are at work. The quantity of ore reduced at this hacienda, in the past month, was 237 montones, which produced 160 marcs. The loss of silver by the barrel was 9 2-10ths per cent., and of quicksilver 4⅝ ozs. per marc; the cost of reduction on the whole being $25 per monton.

Regla.—At this hacienda 1006 quintals of ore were smelted in the month, producing 1803½ marcs. The cost, owing to the small quantity of ore reduced, came out higher than usual, being $18 per carga, which brings up the cost to $3 per marc. In the patio department the results were more favourable—319 montones were washed, and produced, including 106 marcs from the Polvillos, 2158 marcs. The loss of silver was 8½ per cent., and quicksilver 12⅝ ozs. per marc, and the cost of reduction $24 6 per monton. The new Lavadero is now finished, and appears to be extremely well executed.

By the statement of costs and returns, you will perceive that the mine costs in the five weeks of May amounted to $30,646 only, although an extra expenditure was incurred by laying in a stock of fuel for the engines, of $1800, and $1700 extra under the head of charges on ores; still we could not avoid a loss of $9226. During the present month (June), instead of having 40 bars, as we had reason to expect, I fear the actual number will not exceed 36 or 37, which is entirely owing to the small quantity and low ley of the smelting ore—the fundiciones having yielded 10 only, instead of 15 bars.

ST. JOHN DEL REY MINES.—*Morro Velho, May* 18.—Average number of stamping days, with 71 heads, 17·31; heads working during 18 days, 67·57. The supply of ore has been poor—a large number of borers having been in hospital with influenza. In the mine there is nothing new. The Lyon stamps were stopped yesterday, for the purpose of renewing the 15 heads—consequently, you must look for a reduced produce this month. If all go well, John Rouse hopes to have them all working again by the 23d inst., when the lost time will be quickly made up, if the supply of ore be only increased.

UNITED MEXICAN MINES.—*Guanaxuato, June* 25.—*Mine of Rayas.*—I cannot upon this occasion report any improvements in the prospects of this mine. The rainy season having commenced unusually early this year, our drainage now proceeds slowly; last week it was less than half a vara; and, if we have much rain, it is not impossible that we may not be able to reduce the water to the shaft this year at all. The working of Santa Cecilia has gone off, and now presents but an unsatisfactory appearance, having cut through the lode without any appearance of ore. On the other hand, that of San Toribio has improved, and shows a very narrow band of good ore. I annex statement of produce and outlay for the last five weeks, by which you will perceive, that the produce of hacienda ores is under 400 cargas per week, but better dressed than formerly, and the quality thereby improved, in order to avoid the heavy expense of reducing the lowest ores, which will not bear the cost of maquilla and quicksilver. The half-sales, you will also observe, do not reach $1100 per week; while the outlay is not, nor can it be, reduced in proportion.

5 weeks ending	Picked ores.	Half-sales.	Outlay.
May 15	Cs. 2066	$5886 1 0	$21,559 6 6
June 19	1978	5422 6 0	21,170 1 5
	Cs. 88 Decrease.	$463 3 0 Decrease.	$389 5 1 Decrease.

Quicksilver.—I have purchased here 28 bottles, and hope to obtain 66 more from San Luis, in the course of the following month.—William Heath.

Report on the State of the Workings of the Mine of Rayas.

June 23.—*La Purisima.*—No variation has taken place in the system of operations pursued on this side of the mine; nor is there any increase of ore, which is inconsiderable in quantity, and of low ley.

San Lorenzo.—A falling off in the general produce of these workings has been observed during the last month, as regards quantity, owing to the circumstance of the ore being found running into the upper part of the lode, in which position the shots are more confined, and not so much of the level is thrown down as when the ores were met with on the roof; the quality continues as good as heretofore. There is still a small extraction from Santa Martha. Seven pair of barmen are employed by day, and an equal number by night.

San Cayetano.—The powerful extraction of ore during the last five weeks has been from the point situated between the dry wall in San Pablo and the pillar in San Francisco, which has given a fair quantity of common ore, together with some bunches of rich class; and another small lot of the latter is being made up, and will shortly be sent to the hacienda of Barrera for concentration. This point, however, is now nearly exhausted, and the workmen have been removed to the other, or south-east, side of the dry wall, where ores of a fair quality are found, but without any extent of lode to work upon. The point on the north-west side of Pozo Grande produces a small quantity of ore, chiefly in bunches and threads; these are intermixed with rather ordinary classes, which form the general body of the lode. Five pair of barmen are employed by day, and two pair, occasionally, by night.

Santa Cecilia.—Owing to some small cavities having been met with in this cross-cut, 6·61 varas have been advanced in five weeks. These cavities seem to have been passed, as the lode immediately above them, on approaching the upper part of the same, is more compact, and, as far as can be seen, presents a variation in its general formation; this point having only just been reached, nothing more can be said respecting the alteration on this occasion.

San Miguel.—The pit of Inocentes has proved extremely variable during the last month, and now contains a small portion of common ore. There are two other points which produce a small quantity of fair ore, and the operations on this side of the mine are now confined to these three points. A reduction has been made in the number of barmen, which brings with it a reduction of expenses generally, contingent on the number of barmen employed; at present, there are eight pair by day, and an equal number by night.

Santo Toribio.—Since the last report 7·80 varas have been driven in this level; that 60 weeks since, a narrow thread of rich ore was cut nearly in the centre of the level; as the level advanced, the narrow thread gradually rose towards the roof and head of the working, in which position it remains. Last week, a band 2 in. broad, was cut, containing threads of rich ore—this has dwindled down to a very narrow thread; as soon as the end shall have been driven a few varas, an investigation will be made in these points. The water has been lowered 4·94 varas in five weeks, notwithstanding the heavy rains which have fallen so much earlier than usual; it is now confined to the level of San Simon, the extent of which is about 180 varas, with an average breadth of 4 varas; a short distance above the level of the water, six pair of barmen in the 24 hours are employed in throwing down a small quantity of ore of excellent quality, which will assist materially in the improvement of the ley of ores under process of reduction in the Haciendа of Barrera. In the points worked on joint account by buscones, there is no particular variation; a division of the mine toward the south-east, called San Antonio, in which several "campos" are situated, is now the most productive point worked by this class of men, who are carrying on their operation in all directions through the rubbish, and occasionally meeting with an old pillar that contains some good ore.—G. R. Glennie.

CASCADE MINING COMPANY.

The first general meeting of the adventurers in the above mine was held at the British Mining Offices, 41, Moorgate-street, on Saturday, the 31st July.

J. Mee Mathew, Esq., in the chair.

The circular convening the meeting having been read, the Chairman called upon the secretary to submit the several resolutions proposed to be adopted by the meeting, on which a conversation ensued, as to the execution of the lease—a letter of licence having been obtained—and, in the end, it was determined that after passing certain resolutions, having for their object the appointment of a managing committee, with bankers and officers of the company, as also nominating the trustees in whose names the lease should be drawn, the meeting should stand adjourned until Wednesday, the 18th day of August.—The several resolutions were then carried unanimously.—The Chairman stated, that upon the execution of the lease, the mine would be prosecuted with energy; and, from the reports received, there was every reason to expect that the mine would be worked with advantage to the adventurers.—Capt. Clymo expressed his confidence in the adventure; and thanks having been voted to the chairman, the meeting adjourned until the 18th inst.

GADAIR MINING COMPANY.

The first general meeting of adventurers was held at the British Mining Offices, 41, Moorgate-street, on Saturday, the 31st July.

G. W. Blanch, Esq., in the chair.

The Purser having read the notice convening the meeting,

The Chairman briefly stated the objects of the meeting—that of determining on the nature of the operations to be entered upon, to appoint a finance committee, as also the bankers and officers of the company. He was happy to state to the meeting, that the concurrent reports of those practical agents who had inspected the mine, were highly favourable; and the company now being fairly launched, he considered that no time should be lost in developing the resources of the mine, and prosecuting those works which had been recommended by their agents. Capt. Clymo, who had visited the mine, was better able than himself to describe the nature of the proposed workings, as also to report on the prospects which the mine held out, which, he was happy to say, were of a highly encouraging nature, and, to him, convincing of the value of the property they had secured—it requiring only energy, attended by economy, to bring the mine into a productive state. He would call upon the secretary (Mr. Taunton) to read certain resolutions, which would be submitted to the meeting for their approval; and as that, indeed, was the main business of the day, and to authorise the active prosecution of the mine, no further remarks was necessary on his part.

The Secretary reported that the original lease had been surrendered, and the lord had expressed his readiness to grant a new lease for 31 years, at a royalty of 1-16th; whereupon it was resolved, that a meeting of the adventurers be convened, on the completion of the lease; and that seven days' notice of the same be given. He proceeded to read the several resolutions, which will be found in our advertising columns, and which were carried unanimously.

Mr. Molyneux begged to call the attention of the meeting to the importance to be attached to the immediate and active prosecution of the mine; they had now appointed their committee, officers, and bankers in due form; and he was happy to find that the funds of the company were such as to warrant extensive workings. He would wish to be informed by Capt. Clymo, what number of men could, at the moment, be beneficially employed, as he considered no time should be lost? He (Mr. M.) was well pleased with the prospects which the mine presented, and fully concurred in the expressions which had fallen from the chairman.

Capt. Clymo being called upon, stated that, in his opinion, the mine was well deserving of being worked in an effectual manner, and would recommend that 24 to 30 men be employed. He had lately visited the district, and had well examined the property, as also the strata in the immediate neighbourhood, and considered it to be of high promise. He would suggest, that six men should be put to drive the adit end, on the Hound's Cave lode; six men to drive the adit south from the eastern shaft, towards the west point lode; six men to sink a winze below the adit on the Hound's Cave lode, where the principal shoot of ore appears to have gone down; and six men also to drive on the sulphur lode, at or near high water-work. He should also recommend that the necessary works at surface should be at once proceeded with—such as the erection of count-house, smithy, carpenters' shop, &c. He (Capt. Clymo) would be happy to answer any questions which the adventurers present might think proper to put; but he had but little information to afford beyond that conveyed in the report made by him on his return. It was, indeed, only now that they were going to work in an efficient manner; and as he contemplated, on an early day, visiting the mines, he should be happy, on his return to town, to give to the adventurers the result of his inquiries and investigations. He had every confidence in the adventure itself, judging from analogy, and the prospects the mine presented; and was glad to find that the adventurers had determined at once to proceed with activity.

Mr. D. L. Williams congratulated the meeting on the course they had determined upon. He was well satisfied with the importance of the undertaking; and, furthermore, considered it was a great advantage to the company having secured a new lease for the term of 31 years, at 1-16th dues. He had personally visited the mines, in company with practical mining agents, who entertained the one opinion which had been so fully expressed by Capt. Clymo. He doubted not but that, at their next meeting, they would be in a position to report on the successful nature of their operations, and the prospects presented as to future results.

Mr. J. Truscott could not allow the meeting to separate without acknowledging the services of Capt. Clymo, and those who had been consulted: he had also been on the mine, and most readily bore testimony to the value of the property.

A resolution to the effect, that the thanks of the meeting be given to Capt. Clymo, for his able report, and the services rendered by him, was carried unanimously.—Thanks having been voted to the chairman, the meeting adjourned.

EAST COOMBE MINING COMPANY.

A special meeting of shareholders was held at the White Hart Hotel, Okehampton, on Monday, the 2d inst.

T. Hodge, Esq., in the chair.

The Chairman, in directing the attention of the proprietors to the object for which the meeting had been convened, observed, that the point was that of raising additional capital to work the mine, of which the committee formed a high estimate. It was for the shareholders to determine on the course to be adopted. The following report was then read:—

REPORT.

The committee, in presenting their report to the meeting, have to announce that the workings of the mine are for the present brought to a stand-still, in consequence of the failure of top water; that the cross-cut in the 10 fm. level, to intersect the north lode, was being driven; a pare of men were also driving west on the course of the south lode, in the 20 fm. level, to cut the branch of ore that had gone down (the bottom of the 10 fm. level being rich); a pare were also in course of raising silver-lead ore from the back of the 10 (one parcel of which has been sold), when the top water failed. The committee have to state, that steam-power is absolutely necessary to aid in developing the resources of the mine; that the prospects of the mine are of such a character, as to warrant the expenditure of many thousands, in addition to what has already been laid out; that the north lode (the most promising one in the sett) has as yet never been seen below the adit, the miners having been thwarted in their attempt to cut it in the 10 fm. level, by being driven from the works by an influx of water, consequent on the cessation of top power. The committee, seeing that a considerable outlay will be required in the erection of a steam-engine, &c., beg to suggest the propriety of increasing the present number of shares to 4096, and selling a portion of them; thus allowing parties, or rather giving them, an opportunity of participating in all the advantages the mine holds out, and, at the same time, increasing the strength of the company. The committee feel confident, that if the works of the mine were prosecuted with vigour, ore could be raised in sufficient quantities to place her at once on the list of dividend-paying mines.

The Chairman, in referring to the report which had been submitted to the meeting, expressed the satisfaction which he felt—as, indeed, must the adventurers generally—at the prospects the mine presented. He (the chairman) believed the workings had only to be carried out on a more extended scale, to make her a valuable and flourishing concern.

A proprietor was about to make some observation, when Mr. G. Chowen (the secretary) stated, that the first thing to be gone into was the accounts: they were, accordingly examined, and, having been found correct, were passed and allowed.

An Adventurer, referring to the report of the committee, thought the shareholders could not do better than adopt the plan for future operations, as proposed.—Mr. Newton perfectly agreed with the plan suggested by the committee in their report, as to future proceedings; and begged to move, that the course as embodied in the report be adopted, which was unanimously agreed to.—A vote of thanks being passed to the chairman, the meeting separated.

WHEAL MARIA (TIN) MINING COMPANY.

At a meeting of adventurers, held on the 20th July, the accounts were presented, showing—

To six months labour cost, to the end of May, including the building calciner house, draughts and stack for ditto, pits and masons' work for stamps-floor, &c.				£2984	14 10
To merchants' bills for six months, including new calciner, new casting for stamps, new pitwork, &c., two Brunton's patent dressing frames				1338	14 5—£4323 9 3
By tin sold to the 3d July inclusive, 72 tons 9 cwt. 3 qrs.				3683	7 3
Less lord's dues, at 1-18th				202	12 4— 3480 14 11

Leaving balance of 842l. 14s. 4d.; which, with 1234l. 6s. 5d., over from last account, makes present liabilities, 2077l. 0s. 9d.

The accounts having been examined, were allowed and passed, and a call of 5l. per share made, to pay off a portion of the debt. Captain R. Williams was appointed superintending agent, and two-monthly accounts directed to be held in future. It having been ascertained, that a large quantity of tinstuff was deficient, and, although strong suspicion exists against certain parties, yet, with the assistance of a solicitor, they have been unable to convict them, Captain Williams was requested to give the sampling department his particular attention. The fall in the price of tin, it appeared, has made a difference of about 400l. against the adventurers since last account.

The following reports were read to the meeting:—

Wheal Maria, July 20.—Since the meeting of adventurers on the 29th Dec., the engine-shaft has been sunk from the 20 to the 30 fm. level, at a price per fm. of 14l. Drove the cross-cut south 1 fm. 3 ft., and extended the 30 fm. level east 22 fms., and west about the same distance. The western level has scarcely produced any tin, nor has there been any tribute set in it; the lode in the present end is poor, but kindly. The eastern level has produced some bunches and stones of tin, but far from being a productive level; the lode in the present end is 10 in. wide, producing stones of tin, and has a kindly appearance; there are two pitches working in the back of this level, at 10s. in 1l. Harvey's shaft has been sunk from the 20 to the 30 fm. level. The 20 fm. level has been extended upwards of 40 fms. west, 30 fms. of which was kindly, and produced very rich bunches of tin, but for the last 10 fms. it has been unproductive; there are five pitches working in the back of this level, averaging about 8s. 6d. in 1l.; these pitches have produced good tin, but the ground is now getting short in most of them. The new west shaft has been sunk from the 10 to the 20 fm. level. The 20 fm. level has been extended east upwards of 40 fms., and has intersected Kerthen Croft lode; the lode has been poor in this level. On driving east on Kerthen Croft lode, the lode is large and kindly, but not rich; we have also driven 12 fms. west on this lode—the lode from 8 to 10 in. wide, producing good stones of tin. A winze has been sunk from the 10 to the 20 fm. level on this lode; also the new east shaft is holed to this level. Kerthen Croft old mine has been cleared up, and the 10 fm. level driven west 15 fms.; the lode has averaged about 15 in. wide, and produces some good stones of tin and copper, and there is a very kindly lode in the present end. From report, we had reason to expect to have found this mine very produc ive, but so far our expectations have not been realised, though we have reason to hope that a short time will enable us to report an improvement here. On Binner Downs lode, the 20 fm. level has been driven about 32 fms. on this lode; the lode has been a very kindly one, and has produced good tin; there are now working in the back of this level two pitches, at 8s. in 1l.—men doing well; more pitches might be set in this level, if it was better ventilated, which we expect to accomplish by means of the shaft sinking under the adit level, about 8 fms. before the end; there is a tolerable good lode in this shaft for tin, 1 ft. wide. At Calmanaris, the flat-rod shaft has been sunk from 7 fms. below the adit 2 fms. under the 20 fm. level; the lode is now to the south of the shaft, but when last seen, it was a kindly and productive lode; this shaft, whilst the lode was in it, was very expensive in timber—we were obliged to close timber it all the way; the ground now appears much more firm, consequently less expensive. About 2 fms. under the 20 fm. level, in putting in timber, we cut into the lode, and found it to be a good lode for tin. We calculate on seeing the lode in the 30 fm. level in about seven weeks from this time. The 20 fm. level has been extended 15 fms. west, 12 fms. of which has been a very productive lode, but being now poor, and coming towards the boundary, it is suspended. The 25 fm. level east has been driven 25 fms.; the lode has been regular, about 9 in. wide—a good lode for tin; the eastern shaft, coming down about 3 fms. before this end, is in a very good lode of tin. The 10 fm. level has been driven about 40 fms., in which there has been some good bunches of tin, but the end is not rich at present. In this part of the mine we have six pitches working, with 17 men—viz., two at 6s. 8d., two at 8s., one at 11s., and one at 12s. in 1l. In this mine the ground is in general fair, varying from 15s. to 55s. per fm—seldom higher, from which 3s. per fm. is deducted for drawing. We have at this time employed 37 men on tutwork, 51 men on tribute, 10 landers and fillers, 4 enginemen, 2 smiths, 1 carpenter, 2 sawyers, 2 measuring and dividing tin, and 70 men, boys, and girls at the stamps and calciner—total 179.

W. SEMMENS; P. PASCOE.

Perhaps the state of the Cost-book, and other matters laid before you this day, will require from us, as agents, some explanation; and we have thought it best to commit to writing some remarks, in order that facts may be before you without difficulty or confusion; and, at the same time, we hope to vindicate ourselves from that degree of blame which is afloat in the world against us, and prove to you that we have had, in the conducting the affairs of the working of this mine, your interest as well as our own (who are both shareholders) to heart, and have done everything to the best of our ability. If we have had enemies and thieves around us, who are to blame but them? and if the mine has not been so productive as you all, as well as ourselves, could wish, surely this cannot be laid to our charge.

It appears the book will stand in debt to-day for the six months			£842 14 4
In which debt, there is charged for the calciner and its erection	£176	0 0	
Parts of stamps, stamp-heads, lifters, &c.	92	10 0	
Labour in the erection of ditto	27	10 0	
Labour, timber, &c., on stamps-floors	85	5 0	
Ditto, on calciner floors	20	0 0	
Tools, frames, boddles, strakes, &c., for stamps and calciner floors	60	0 0	
Labour in making and covering calciner flues	12	0 0	
Brunton frames, with launders house, &c.	60	0 0	
Extra pitwork for sinking	40	0 0	
Making a new wheel at Wheal Gilbert	30	0 0	
Engineer erecting engine	21	0 0—624	6 0
			£318 14 4

The fall in the price of tin is considerably more than this balance. The balance of our tin stock, as per book, appears to be about 30 tons: we cannot by any means say that we have this stock in the mine, but, to the best of our judgment, there may be about 20 tons. It is, we believe, known to most of you, that we have been desperately plundered of tin from Wheal Gilbert stamps, and it is impossible to say to what extent; for ourselves, we can only say, that we have used the utmost diligence in our power to protect the property sent there, by attending there as often as circumstances would admit of our leaving the mine, both by night and by day; but we never could detect anything wrong, though we had sometimes doubts that things were not right, in consequence of the tin always coming short of our calculation; and we now firmly believe that the thing was so contrived as to be a system of pluder from the mine shaft almost to the smelting-house. It has been asserted, that we ought to be able to give an exact account of the deficiency, but you will be pleased to take into consideration, that we sent there considerable quantities from heaps standing in the mine for many months, and composed of various qualities and descriptions, so that without every load was sampled we could by no means ascertain the quantity of tin it contained, besides this, as soon as the mine stamps was set to work, and before the calciner was working, we had to send the whits from here there, to burn; and, after the calciner was working, the whits from there were sent here, so that without sampling each separate lot it was impossible to obtain anything like a separate or correct account; since the tin has been stamping and dressing in the mine, you will plainly see we are making fair returns, as in the six months the total quantity has been 72½ tons, and for the two months, ending the 1st July, 26½ tons were sent to the smelting-house. We cannot, however, but admit that the adventurers have sustained a very severe loss by plunder, but we respectfully assure you we do not consider ourselves liable to take all the blame on this head, as at the stamps there were agents, or men appointed to manage and protect the property, who were sent here with characters for honesty and integrity, if these men have betrayed their trust we hope you will not lay this burthen on our shoulders. Another cause of our present embarrassment is the poverty of our bottom levels, had these levels been so productive as the levels above (and no one had reason to think to the contrary), and had the price of tin continued as it was at our last meeting, our cost-book would not to day have presented such an unfavourable appearance.

W. SEMMENS: P. PASCOE.

NORTH UNITED MINES.—At a meeting of adventurers, held at the mines on Wednesday, the 28th July, the accounts,—showing balance of 223l. 4s. due to the purser, having been examined, were allowed, and a call of 4l. per share made.—The purser was directed to obtain payment of outstanding calls (307l. 8s.), and to convene a meeting, when the result of the operations so strongly recommended by the agents shall have been sufficiently developed.—The following report from Capts. John Williams and N. Hocking was read to the meeting:—"Since our north shaft has been sunk to the 90 fm. level we have driven east 10 fms.; about 8 fms. from the shaft we intersected another lode, with a south underlay, and the lode we are driving on has a north underlay; to prove the intersection of these lodes below this level, we thought it best to sink a winze on the junction; this we have commenced doing, and are down 7 or 8 ft. below the level; the lodes both in the winze and end are going together, so that we break nothing but lode, and it is not without copper, but not enough to save. In the 90 fm. level, west of shaft, we have driven 11 fms.; the lode in this end is of the same character as in the eastern end, from 2 ft. to 3 ft. wide, until within the last fathom we drove, it is now about 15 in. wide. In the 75 fathom level west the lode is not so large, but we have broken good stones of ore in this end; we expect to intersect a north and south lode in 4 or 5 fms. before us. In the 75 fm. level east the ground is hard, and the lode small; we thought it best to remove the men from this end, and put them to sink on the junction of the lodes in the 90, so this end is suspended for the time. In the 60 fm. level north we have driven out under the sea on the north and south lode 45 fms., and have not crossed any other lode; we can give no reason for this, unless the lodes we can see at the surface at Carn Nean underlay faster north than we anticipated. We should recommend the adventurers to continue driving the 90 fm. level both east and west. The lode which has dropped in unexpectedly on the north side of the eastern end has a kindly appearance, and has improved the character of the standard, so that it would be very desirable to prove the junction of these lodes by sinking the winze and driving the levels, and we should also recommend driving the 75 fm. level to intersect the north and south lode, which is about 4 fms. distance."

WHEAL WALTER.—A special general meeting of adventurers was held at the mine on Tuesday, the 27th July, for the purpose of taking into consideration the propriety of selling the present adventurers' interest in the mine and materials, for adopting some measures for discharging the liabilities, and on general business—Mr. JOSEPH JUDGE HAYS, Chairman. The following resolutions were passed unanimously:—"That the purser be authorised and instructed to advertise for sale by public auction, within one month from this date, the engine, mine, and materials, as they now stand on the mine; and in case that no purchaser be found at a price to be agreed on (in one lot), to sell the materials by public auction, in convenient lots, on the same day, to the best bidder." "That for the purpose of carrying out the above resolution, Mr. J. J. Hays, one of the lessees, do apply to Mr. J. Crofts for the lease or grant of the mine, now in his custody or possession"; and that the purser inform him his services are not further required to act as secretary; and also to hand over to the said Mr. J. J. Hays, all vouchers, papers, documents, books, and accounts, now in his keeping or custody, belonging to or in any wise relating to the mine; and that he immediately make up the bank book, and forward the purser a cheque, signed by the committee, for the balance now in the bankers' hands." "Mr. W. Snell having been appointed to audit the accounts of the mine, has reported to this meeting that there is a sum due to the purser of 261l. 10s. 2d. to the end of April, 1847; and if all the calls are paid, there will be a balance due to the adventurers of 28l. 17s. 9d.; it be therefore resolved, that the accounts to the end of April having been found correct, be allowed and passed." "That Mr. W. Snell and Capt. Opie, be authorised and empowered to value the mine and materials; and that the meeting do authorise the purser to dispose of the mine and materials, in one or more lots, at such fair and reasonable sum as they may think proper.

EAST WHEAL CROFTY.—At a two-monthly meeting, held at the mine, on the 20th July, the accounts were produced, showing the cost for May and June, 1847, as 3290l. 8s. 10d.—By ores sold June 3, 3184l. 15s. 4d.; by discount on bills, 19l. 13s. 2d.=3204l. 8s. 6d.—showing loss of 85l. 15s. 4d. In hand, end of June, 2706l. 1s. 1d.; leaves now in hand, 2620l. 5s. 9d.

WEST WHEAL BASSET.—At a meeting of adventurers, held on Monday, the 2d inst., the accounts exhibited showed:—Balance due to purser, last account, 315l. 9s. 9d.; labour cost for March, April, May, and June, 439l. 11s. 10d.; merchants' bills, 217l. 19s. 1d.=972l. 0s. 8d.—By copper ores (less 4l. 19s. 6d. dues), 74l. 12s. 5d.; by eleventh call, 5l. per share, 640l.=714l. 12s. 5d.—leaving balance now due to purser, 258l. 8s. 3d., to meet which, and carry on further operations at the mine, a call of 5l. per share was made.

WHEAL BASSET.—At a two-monthly meeting of adventurers, held at the mine, on Monday, the 2d inst., the accounts were presented, showing the labour cost for May and June as 1243l. 10s. 6d.; merchants' bills, 457l. 9s. 1d.=1700l. 19s. 7d.—By copper and tin ores (less 66l. 12s. 10d. dues), 1266l. 4s. 7d.; by Ting Tang adventurers, 4l. 15s. 8d.=1271l. 0s. 3d.—showing a loss of 429l. 19s. 4d.; balance in favour of last account, 161l. 15s. 11d.: leaves book now in debt, 268l. 3s. 5d.

ACCIDENTS.

Causeway Green, Hales Owen.—As J. Birchall and J. Woodhouse were descending the pit, to relieve two others, some part of the machinery broke, when they were drawn at a tremendous rate up the pit, thrown a great distance into the air, and miraculously escaped falling down the shaft again—the injuries they received, however, shortly occasioned their death.

The Boiler Explosion at Cradley Forge, Stourbridge.—Two men, who were present at the boiler explosion, which happened about a month ago, were so much excited by the occurrence, that one has since died in a fit of apoplexy, while the other ruptured a blood vessel, and remains in a precarious condition.

Ettingshall, near Bilston.—T. Lockley was drowned in a colliery sump—the water was about 6 ft., and deceased fell while in the act of jumping from a skip.

Moseley Hole.—T. Boycott was killed by a fall of coal in Mr. Brown's colliery.

Melancholy Death at Mr. Cochrane's Iron-Works, Woodside, near Dudley.—As W. Davis was assisting three men, engaged in removing hot metal from a ladle in a "ramp," some of the hot metal ran over the side of the ladle upon him. His clothes were immediately in flames; he was very badly burnt, and shortly after died. A witness stated, that it was not Davis's duty to assist in removing the metal; it was his own voluntary act.

Lamorna, Penzance.—A quarryman, named Spargo, was killed by the explosion of the powder, while he was engaged in tamping a hole.

Cwm Avon.—T. Lewis, aged 6 years, was killed by falling on a piece of casting.

Another Bridge Accident.—On Thursday evening, shortly after five o'clock, four arches fell on the new line of railway in course of formation between Blackburn, Darwen, and Bolton, which was attended with the loss of two lives. From what our reporter could glean hastily, from the best sources, it appeared that the line of arches from Tonge, past Turner-bridge, and across Little Bolton, and which are partially formed, have given way in this instance in the clump on the northerly side of Turner-bridge. Being in what may be termed the green state, and having no packing from the Tonge side, they gave way, and about seven men (labourers) were at the top at the time. Several sprung forward, leaping to the ground, on feeling the arches give way, and escaped uninjured, at least to any material degree. Two of them, however, fell amongst the ruins; and one them, J. Pilling, a young man, 18 years of age, was immediately taken out dead. The other, T. Mroris, an Irish labourer, of about 26 years of age, expired about half-past seven o'clock. They were conveyed to the Starkie's Arms, Tonge Moor, to wait the coroner's inquest.—*Man. Courier.*

Explosion in a French Government Steamer.—A lamentable and fatal accident has occurred on board the royal steamer the *Compte d'Eu*. This vessel quitted Havre on Monday for Cherbourg, where her machinery was to be inspected and tried by a special commission. At about half-past six in the evening, when off Barfleur, part of one of her boilers gave way, and the boiling water rushed into the engine-room. Twenty men were victims of this accident. Seven of them had died when the account left, and 13 were seriously injured. Of the seven who are dead, three were stokers, one an engineer, and three seamen. Of the 13 wounded, four are stokers, one is an engineer, one a man employed to put up the machinery, and the rest seamen. The Minister of Marine has ordered an inquiry, in which the makers of the engine will be examined. We have extracted the above from the *Moniteur Parisien*; the following is from a letter written by a person on board the *Compte d'Eu*. After mentioning the bursting of the boiler, he says:—"There was immediately a cry of '*Secourez les chauffeurs*;' but how was any one to go down to the engine-room? The commander of the vessel, however, listening only to his courage (although he has only one arm), went down, at the risk of his life, and directed the removal of the victims. The deck was soon covered with 20, in a state impossible to describe—they hardly resembled human bodies. Before 10 at night, nine of them had yielded up their last breath—two hours before the commander had decided on returning to Havre. At two in the morning we cast anchor in the roadstead, and orders were given immediately to put out all the boats to convey the dead and wounded to land. In our boat we had four dead bodies; and, having arrived rather before the other boats, we went for assistance on board the *Rôdeur*, and to the post of the national guard at the Mairie. Every one hastened to prepare litters and other means for conveying the wounded, 11 in number, and suffering horribly, to the hospital." The *Journal du Havre* of yesterday says:—"There was no explosion, no concussion was even felt on the deck, where the accident was only manifested by the torrents of steam that escaped from the engine-room. The boiler burst at the lower part, and the water falling upon the fires and out of the flues of the furnaces, spread over the room, and inundated it with steam, and the still burning remains of the fires. Of the wounded who were conveyed to the hospital, one expired this morning; and of the other 10, five are in a state which leaves little hope of recovery. Among the dead, some who appear to have been attacked on the breast and face by streams of boiling water or hot coals, have those parts burnt—others who were plunged in the boiling water are swelled, and not recognisable. The legs of all the dead, and also of the wounded, are excoriated, and completely denuded of skin. This sad event has filled our town with mourning. To-morrow, at eight o'clock, a funeral service, for the repose of the souls of the dead, will be performed at the church of Notre Dame, and the bodies will then be interred."

CONSTANTINE, CORNWALL.—The great increase in traffic here, mainly occasioned by the large demand for granite, in which the parish abounds, and the consequent additional employment of scores of men from several parishes adjoining, is a great blessing, and has given rise to observations that we are a model of prosperity. The farmers feel the great efficacy of the work in the easiness of the rates, and the few applications for extra relief. We hear that application has also been effectually made for the erection of a tram-road to expedite the transit of granite from the principal quarries to the newly-erected quays on the Helford river. In combination with the granite trade, Wheal Vyvyan Mine, which, for several years past, has been paying dividends to the enterprising adventurers, is another great benefit to the neighbourhood, and its success has given a stimulus to working other lodes in the parish. A continuation of Wheal Vyvyan lode, parallel to, and adjoining, the old Traffeen Mine, is being worked; on which, notwithstanding the shallow depth it is wrought at—viz.: adit level—the lode is large, and highly promising, containing some good tin work; and the situation being in the killas, with a near approximation to the granite, has led mine agents of much experience to express warm sentiments of future success. Other lodes are being laid open with equally good indications, and the generally received opinion is, that this place will, ere long, become an important mining district.—W. J. COLLINS.

BRISTOL AND EXETER RAILWAY.—We are glad to hear this well-conducted line of railway is progressing with its branches, to the great convenience of the public and benefit of the property. The little branch to Clevedon was opened for public traffic on the 28th July—this will not only prove advantageous to the town, but of much convenience to the many visitors from Bristol and Bath.

THE LANDORE VIADUCT.—This magnificent viaduct, which will be about half a mile in length, and upwards of 60 feet above the tidal level in height, was commenced on Monday last. This important project will connect the South Wales Railway a little above the Morfa Copper Works, and, it is expected, will be completed in about 10 months' time.

It is expected that the dividend of the Eastern Counties will be 12s. per 20l. share.

The available balance for dividend of the Midland, to be appropriated at the meeting of Tuesday next, exceeds that of the previous half-year by upwards of 40,000l.

If the contractor, Mr. Brassey, keeps his time—and he is not likely to fail in an engagement—the South-Western will have its Windsor line completed by next June.

Travellers to Dorchester will rejoice to hear, that the tunnel through Southampton being now secure, will come into use very shortly, and that they will thus be spared the misery of shifting into omnibusses, to go less than a mile.

Messrs. Wilson and Co., upon the opening of their new foundry for the construction of locomotives, at Leeds, last week gave a festival to the workpeople, and the most important townsmen of the place.—*Railway Chronicle.*

MONMOUTHSHIRE—MINERAL PROPERTY FOR SALE.

TO BE SOLD, BY AUCTION, at the WHITE LION HOTEL, in PONTYPOOL, on Wednesday, 25th August, at Three P.M. (if not previously disposed of by private contract, of which notice will be given), the property of TIR PENTIES, in the parish of TREVETHIN, MONMOUTHSHIRE. This property is freehold, and contains 60, 3, 27 acres—is within two-and-a-half miles of Pontypool. The house and homestead are in good repair. The property is divided and enclosed by good fences; is fertile, and in a fair state of cultivation. There is also a right of common attached. The parish road from Pontypool to Lanihithel passes along. Also, a tram-road to the canal.

This property contains all the well-known coal measures of this rich district, to the extent of 43 ft. in thickness: some part being workable by level, and the whole obtainable within a reasonable distance by pit. The regular ironstone measures also accompany this property.

All information may be obtained by application to Mr. W. Williams, Farmer's Arms, Merthyr, the Proprietor; or Mr. R. Beaumont, mineral engineer, Llandaff.

ESGAIR-Y-MWYN MINE, CARDIGANSHIRE, SOUTH WALES.

SIR,—We commenced operations here about the middle of May last: since that period, I gave you, as near as possible, my opinion of the surface and underground operations then ascertained. We have some weeks since cleared and drained the shaft (and the only one in the mine) to the bottom, but find the former parties wrought under that level by means of hand-pumps, several of which we found at their old place of labour. We drained the water out of the old sumps with barrels, 4 fms. deep, and find the lode stoped east and west of the sumps, what distance we cannot say. We have now got down to stuff, which will prevent much progress for a short time in sinking. Owing to the water being drained, the ground on the north side must be secured with timber, before we attempt any deeper. We find the lode in the back of this level, which is 25 fms. below the adit, very good, and only a small arch, or pillar, left to secure the ground. The west end is driven 40 fms. on the main lode, which has a very promising appearance, producing some good lead ores; but we are not prepared to drive this as yet, owing to the east level being full of stuff, and shall commence at once to clear it, in order to take up the water, which must be finding its way down to the old sumps, and also endeavour to open ground in that direction, which must be an important step. The 20 fm. level, also on main lode, is full of stuff east, which we shall commence clearing this day. The north lode, at the 20 west, we have driven about 2 fms., and raised about 3 tons of ore, but at present it is much better—worth from 30l. to 35l. per fm. A stope east of cross-cut, on north lode, 20 fm. level, yielding about 12l. worth of ore per fm. In the 15 fm. level, west of engine-shaft, we have driven about 3 fms., producing on an average, about 1 ton per fm.; this level is on the main lode, and also full of stuff east, which we are now clearing. Five fms. above this level, two men are raising ore at 4l. per ton on tribute, and are getting good wages; and all the ground we have met with on the course of the lode is worthy of trial, and will eventually be taken away by parties on tribute. There is no doubt, but at a certain depth all these different branches will come into one body of ore; and at present we have every prospect of a long and lasting mine at our present depth. We shall soon begin to return ores, and our only delay appears to be the want of machinery, crusher, water-wheel, &c., which we are preparing as fast as possible on the mine. The engine-shaft is divided and cased from adit, 12 ft. above and 25 fms. below, with ladder-way, plat sollars, &c, complete. We have also built a horse-whim, poppett-heads, &c., which is in full operation, drawing the stuff to clear the mine. Also repaired the store-rooms. A powder-house will be completed in the course of this week; and we shall commence to build a smiths' and carpenters' shop on the top of the mountain. The washing floors are walled in, and so far completed as to commence washing some of the ores this week, but must be made a deal more extensive. This mine has been inspected by one of the first managing agents from Cornwall, and is considered to be one of the first, if not unequalled, speculations in this county as a lead mine. We are prosecuting it in a first-rate manner—the materials of best quality, and arranged by good workmen, and, as far as we have done, with neatness, strength, and dispatch.—JAMES RULE, Resident Agent.

Esgair-y-mwyn Mine, Aug. 2.

EAST CARADON MINE.

SIR,—In reply to the enquiry of your "Constant Reader," as to the locality of the East Caradon Mine, I beg to say, it is one of the few locally entitled to the envied appellation of "Caradon" at all; which some of the small adventures in the neighbourhood (consisting, may be, of a horse-whim, and a few shallow pits) have no right to assume.

East Caradon is most favourably situated: the sett is extensive, and is bounded by South Caradon on the west, the Caradon Mine on the north, and Tokenbury on the east; and may not unreasonably be supposed to contain in its limits some of the lodes of these undertakings. The adventurers are a most respectable body; no needy men, who sell shares to grasp a hasty profit, but who prosecute their work in the true spirit of mining;—enterprising, yet cautious; wisely shunning all needless expense; and, it is to be hoped, before the expiration of their lease, they will reap a rich return for their outlay; and that East Caradon will cut a figure, not as now it does, in your share list only, but also in the ticketing paper.—ANOTHER CONSTANT READER.

Marylebone, August 2.

TIN BOUNDS.

SIR,—This important question, connected with mining, involving as it does so much valuable property, is again apparently doomed to be drawn through the law courts. The elaborate judgment which was delivered by Lord Denman and appeared in your columns last week [see *Mining Journal* of 17th July], tends rather to mystify than make clear the question as to the legality of tin bounds. Two conditions, says his lordship, are essential to be exercised and operated on in order to legalize tin bounds:—that (as I take it) the bounds must be continually working to make the property legal. Now, Sir, from the decisions of the earliest courts down to the trial of Brenton *v.* Rogers, tin bounds had been made legal by means of the ancient usage of cutting two "turls" at the separate four corners of the bounds. This view, however, differs materially from his lordship's judgment. I am aware of the fact that thousands—nay, tens of thousands—of pounds have been given and accepted for this property under the ancient usage or custom now refered to; if, therefore, this condition of his lordship must have been acceded to and exercised on, strange, passing strange, that these conditions should never have appeared legal until this decision. The antiquity of tin bounds dates rather too far back to be upset by the means now adopted by some parties to put off and procrastinate, as they are now doing. Why not boldly, and at once meet the bounder, and set aside this long-agitated question. This judgment of Lord Denman's tends longer to procrastinate, and still to increase and multiply expenses consequent on all legal proceedings; this property, being sold and re-sold, and exchanged by hundreds of purchasers, must be legal. Many there are, I know, who obtained a respectable livelihood from the dues arising from tin bounds; but the interference and grasping of some parties have swept away old usages, old customs, and, indeed, the law: they have a new order of things to come in and upset the law. Tin bound, nevertheless, will remain firm and stable, and if an Act of Parliament be obtained for the purpose of setting aside this ancient property, most unquestionably justice (the basis of our laws) will demand in this, as in another important property, a fair remuneration for the same.

Saint Agnes, July 29. A TIN BOUNDER.

THE WEST INDIAN MAIL.—The *Avon* arrived at Southampton on Monday with dispatches from Mexico and the West Indies; her freight consisted of $286,016; 890 ozs. gold dust; 1603 ozs. British coin; 101 serons of cochineal; and a general cargo; but all on merchants' account.

THE MINERS OF LANARKSHIRE.—The strike, which took place upwards of a week ago, is every day becoming more important to the iron trade. On Thursday last the whole of the blast furnaces at Dundyvan were stopped for want of material.—*Edinburgh Witness.*

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Present Price.	Last Div.	*Traffic Returns.* 1847	1846
Arbroath and Forfar	15	£142,900	26½	3 p.c.	£ 432	£ 340
Chester and Birkenhead	15	658,258	—	2½	792	1040
Dublin and Drogheda	35	689,248	—	3½	1024	847
Dublin and Kingstown	7½	473,282	—	9	1601	1438
Dundee and Arbroath	16½	156,323	38	6	—	419
Dundee, Perth, and Aberdeen	47	285,745	—	6	1180	419
East Lancashire	30½	814,417	15½	—	1257	—
Eastern Counties	226	6,513,096	18½	7	13007	9314
Eastern Union	44	531,021	59	—	1177	443
Edinburgh and Glasgow	46	2,275,435	67	6	4259	4139
Glasgow, Paisley, and Ayr	60½	1,567,281	—	7	3090	2786
Glasgow, Paisley, & Greenock	22	935,916	—	2	1424	1324
Gt. Southern & Western, Ireland	110½	1,343,716	21½	—	1695	—
Great Western	241	9,714,939	109	8	24001	21591
Kendal and Windermere	10½	108,171	—	—	229	—
Lancaster and Carlisle	70	1,575,625	60½	—	1459	—
London and North Western	378½	18,042,004	170	10	48027	46270
London and Blackwall	4	1,102,717	6½	1½	1502	1491
London, Brighton, & South Coast	137½	5,409,667	51	7	13502	11526
London and South-Western	186½	4,276,789	65½	9	11892	8954
Londonderry and Enniskillen	14½	—	—	—	160	—
Manchester & Leeds	117½	5,036,391	109	8½	9358	7367
Manchester, Sheffield, & Lincolnsh.	49½	1,679,108	—	5	3355	2283
Maryport and Carlisle	29	414,895	—	—	677	543
Midland Company	860½	7,862,274	120	7	22820	19117
Newcastle and Berwick	65	1,184,079	37½	5	3710	—
Newcastle and Carlisle	65	1,184,080	118	5	3933	2104
Norfolk	70½	1,199,689	110½	7	2578	1612
North British	73½	1,459,958	30½	—	2866	1983
Shrewsbury and Chester	17	354,945	21½	—	509	—
South Devon	20	1,061,283	20	5	1172	776
South-Eastern	157½	5,886,411	33½	3½	11663	11265
Taff Vale	26	889,411	—	6½	1560	1173
Ulster	25	358,359	52	5½	755	617
Whitehaven Junction	12	91,374	—	—	273	—
York and Newcastle	163½	1,719,617	26	9	6669	7384
York and North Midland	182½	2,483,256	62½	10	8731	6846

Total earnings for last week, £196,878, being an increase of £34,723 over last year.

FOREIGN RAILWAYS.

Amiens to Abbeville	28	373,338	—	4	698	—
Dutch Rhenish	57½	—	3	—	1913	1733
Northern of France	308½	2,090,000	11½	4	12003	6156
Orleans to Tours	72	600,000	—	4	2866	2337
Paris and Orleans	83	2,011,720	50	12½	7453	7131
Paris and Rouen	94	2,092,916	36½	8½	6176	6899
Rouen and Havre	59½	—	25	4	3309	—
Strasburgh and Basle (monthly)	88	—	—	1½	9342	9654

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 197 ½
3 per Cent. Reduced Ann., 87½ ½
3 per Cent. Consols Ann., 86⅝ ½
3 per Cent. Annuities, —
3½ per Cent. Ann., 86⅝ ½ ⅝
Long Annuities, 9⅛ 9
India Stock, 10½ per Cent., 242
3 per Cent. Consols for Acct., 87 6⅛ 7
Exchequer Bills, 1000*l.* 2*d.*, 6 pm. 5 3 dis.

Belgian Bonds, 4½ per Cent., 93⅜ ½
Dutch, 2½ per Cent., 56 ⅝ ½
Brazilian, 5 per Cents., 84 5½
Chilian, 6 per Cents., 92½ 2
Mexican, 5 per Cents., 17⅛
Spanish, 5 per Cents., 20½
Ditto 3 per Cents., 30½
Portuguese, 5 per Cents., 80
Russian, 5 per Cents., 112

MINES.—The transactions in the mining share market this week has been of a very limited character; although in some of the favourite mines buyers are to be found, still the limits given to the London brokers are generally below the prices fixed by sellers—consequently, the business really effected may be considered as very little.

The general election, which appears to be an all-absorbing question with our country friends, may be reasonably deemed as another great impediment to the completion of business; but now that this grand and important national measure is nearly concluded, with the many private negotiations in course of operation, we may fairly contemplate that a considerable revival in the mining share market will be eventually the result.

In Treviskey and Barrier, Treleigh, South Wheal Basset, East Pool, Trehane, and Herodsfoot, buyers may be found.

A few shares in Coatlithe Hills Mine have changed hands at our quotations.—Transactions in the following mines have been effected—viz.: West Providence, Trelawney, Trehane, Gwinear Consols, West Seton, North Roskear, West Basset, Treleigh, Condurrows, Tremayne, Tresavean, East Crowndale, Kirkcudbrightshire, &c.

By an oversight, in correcting our list of last week, we quoted Callingtons at 25: this was a great error, there being buyers at a much higher price for the last three weeks or more. In consequence of that quotation, a great number of inquiries have been made for shares at the quoted price. Upon inquiry we find that the profits for April, May, and June, are upwards of 1000*l.*: we have, therefore, returned to the nominal price of 30.

We hail with pleasure the slightest boon that is afforded the adventurer and the tributer, and were, therefore, gratified to notice an improvement in the standard of last week. We also learn that an influential and powerful smelting company is about being established on equitable and independent principles, and which, we trust, if not contaminated by coalition, will force the bonds of the present monopoly.

We noticed last week the sale of nearly 120,000 slabs of Banca tin at Amsterdam, on the 27th ult., by the Dutch East India Company, and that the whole were purchased by two Dutch houses, who afterwards sold 30,000 slabs to a Rotterdam firm, at an advance. Since then we have had an advance on British tin, which, we hope, will continue to a profitable remuneration to the English tinner—there having been a falling off lately, not only in price, but the returns of tin, by the suspension of several old tin mines in Cornwall.

In the foreign share market there has been very little business done—the only transactions, that we are aware of, have been in St. John del Reys, Bolanos, and Imperial Brazilians; but holders in these are very tenacious, waiting with anxiety for the next accounts from the mines—in full, of important news from their newly-acquired mining property.

In Australians there are buyers, but not at present quotations here, also, much interest is excited by the anticipated bills of lading from the colony by the next arrival.

By the *Bombay Times* of the 19th June, received on the 2d instant, we learn that some important discoveries of mineral deposits have been made in India, and also extensive fields of coal; for particulars of which we refer our readers to extracts from our Indian contemporary.

RAILWAYS.—We regret to have to announce a still more apparent depression in the price of railway shares, since our last publication—the market not only assuming a more sluggish aspect, but the price of stock being materially reduced in value. The business, at the commencement of the week, was very limited, and no indication to buy, even at the low rates; but, on Thursday, a greater change took place, in consequence of the unexpected announcement of the Bank directors, which created great sensation in the City, that the minimum rate of interest and discount on loans would in future be 5½ per cent.—thus leaving it to their discretion to decide what the maximum rate should be: this important announcement created a very great depression, particularly in foreign lines—from which, yesterday, the market had not in the slightest rallied.

HULL, THURSDAY.—The market, since our last, has been without animation: yesterday and to-day, however, more business has been done, but sellers have been obliged to submit to lower rates. A considerable amount of business could be done here in New Berwicks just now, which are quite the current stock, at market prices.

LATEST CURRENT PRICES OF METALS.

LONDON, AUGUST 6, 1847.

	£	s.	£	s.	d.
IRON—Bar *a*..Wales...*ton*	0	0	8	10	0
,, ..London ..	0	0	9	10	0
Nail rods ,, ...	0	0	10	10	0
Hoop(Staf.) ,, ...	0	0	11	15	0
Sheet ,, ...	0	0	13	0	0
Bars ,, ,, ...	0	0	11	5	0
Welsh cold-blast foundry pig ..	4	10	5	5	0
Scotch pig *b*, Clyde	3	5	3	10	0
Rails, average	0	0	9	0	0
Russian, CCND *c*..	0	0	—		
,, PSI	0	0	—		
,, Gourieff	0	0	—		
,, Archangel	0	0	13	10	0
Swedish *d*, on the spot	11	10	11	15	0
,, Steel, fagt.	0	0	16	5	0
,, ,, kegs *e*	14	15	15	0	0
COPPER—Tile *f*	0	0	97	0	0
Tough cake	0	0	98	0	0
Best selected	0	0	101	0	0

	£	s.	£	s.	d.
COPPER—Ordin. sheets, *lb.*	0	0	—	0	0
,, bottoms .	0	0	—	0	0
YELLOW METAL SHEATHING	0	0	—	0	0
TIN—Com. blocks *g*..*cwt.*	0	0	—	4	8
,, bars	0	0	—	4	9
Refined	0	0	—	4	11
Straits *h*	4	4	—	4	5
Banca	0	0	—	4	6
TIN-PLATES—Ch., IC *i*, *box*	1	8	—	1	10
,, IX ...	1	14	—	1	16
Coke, IC	0	0	—	1	5
,, IX	0	0	—	1	11
LEAD—Sheet *k* .....*ton*	0	0	—	19	10
Pig, refined	0	0	—	20	5
,, common	0	0	—	18	10
,, Spanish, in bd.	0	0	—	18	0
SPELTER—(Cake) *l* on spot	0	0	—	20	0
,, ,, for arrival	0	0	—	20	0
ZINC—(Sheet) *m* export.*	0	0	—	27	0
QUICKSILVER *n* .....*lb.*	0	0	—	0	4

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto
e In kegs ½ and ¼ inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash.
m Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

MONTHLY REPORTS.

[From our Correspondent.]

IRON.—The export demand for Welsh Bars improved in past month, and the lowest price is now 8*l.* 10*s.* in Wales, but some will not sell under 8*l.* 15*s.* Staffordshire prices continue firm, and the demand for Hoops has lately been unusually great. Scotch Pig has advanced 5*s.* to 7*s.* 6*d.* in the last four weeks. About the middle of July a large business was done, but far the last fortnight transactions have been limited. The strike of the men is partially over, and it is expected that those who are still out will soon resume work at the proposed reduction of wages. Some recent arrivals of Swedish Iron have been sold at 11*l.* 5*s.*, but of Steel no sales are reported.

COPPER AND YELLOW METAL SHEATHING remain without change as to prices, with a steady demand.

TIN.—English continues at last month's quotations, with a fair demand. At the sale in Amsterdam, by the Dutch East India Company, on the 27th ult., the whole 120,000 slabs of Banca were offered in one lot, and bought by a Dutch house at 45½ fl. per 50 lbs. Neth. The purchaser immediately resold 30,000 slabs, at 49 fl., and engaged not to sell any more for three months under 51 fl. This sale has not affected either the prices of English or of foreign in our market. The stock of Banca and Straits now here is 495 tons.

TIN-PLATES.—We have found an improvement in this article lately, and prices are firm.

LEAD.—There has been a rather brisk business done in Lead during the last three weeks, and the smelters have made large sales. Some soft Spanish has lately come into this port, but no arrivals of American, either here or at Liverpool.

SPELTER.—There was a very good export demand in the early part of July; but, for the last two weeks, the sales have been very limited; holders are firm at 20*l.* to 20*l.* 5*s.*, both on the spot and for arrival: the stock on hand is 2430 tons.

(From a Correspondent.)

IRON.—An improvement of 5*s.* to 7*s.* 6*d.* per ton has taken place in Welsh bars since last month, and a considerable business has been done both for exportation and home trade at the advanced rates. So full are some of the makers with orders that they cannot undertake so execute contracts before Oct. next. Railway bars continue exceedingly dull. Staffordshire manufactured is still in fair demand, and makers are realizing full prices. Scotch pig-iron has slightly advanced since last mail, owing principally to the strike of the men, and the small quantity in second hands. Staffordshire pig is in good demand at firm prices, but Welsh appears rather neglected. Swedish iron has been taken in small parcels at 11*l.* 5*s.*, at which there are still sellers. Swedish steel remains flat at 15*l.*

ENGLISH COPPER continues in fair demand at present quotations, as also English TIN. The large sale at Amsterdam of 120,000 slabs, came off on the 27th July, and the whole was taken at 45¼ florins, by a Dutch house, who afterwards sold about one quarter of the lot at an advance of 3¼ florins. Banca has declined here to 66*s.* Straits firm at 84*s.* to 85*s.* Tin-plates have slightly improved within the last fortnight, and a large export business has been done, particularly to India.

ENGLISH PIG-LEAD has been in good demand latterly, and large sales made, principally for home trade, at firm prices. In Spanish nothing doing, and no stock of American.

SPELTER.—The demand for this article has been rather limited during the latter part of last month. Holders are willing to sell at 20*l.*, and few disposed to give it. Within the last few days, however, about 100 tons have been taken for shipment to India at the latter rate. Stock on 1st August, 2430 tons.

QUICKSILVER firm at 4*s.* 6*d.*, but little or no business done.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4	20
256	Alternun Consols	2	12
235	Andrew and Nangilles	284	16
10000	Ayrshire Iron Company	5	4½
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	10
4000	Bedford	2½	3½
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	24½	7½
8000	Blaenavon	50	22
100	Botallack	175	140
120	Brewer	5	7
10000	British Iron, New, regis.	10	18½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwlch Cwmerfin	20	—
128	Callestock	17	30
1000	Callington	19	30
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	17
256	Caradon United	24	10
256	Caradon Wh. Hooper	20	4
1000	Carn Brea	15	105
2048	Carmarthen Consols	2	3
2048	Cascade	1	1
112	Charlestown	200	100
166	Cloveland	9	5
512	Coatlithe Hill	½	1-1½
1900	Combmartin	7½	3
500	Comblawn	1½	1½
128	Comfort	45	100
256	Condurrow	20	27½
2560	Cook's Kitchen	14	5½
1000	Coombe Valley Quarry	1½	1½
1000	Copper Bottom	1	5
1024	Cosheen	4½	20
240	Craddock Moor	15½	15
128	Creeg Braws	120	100
500	Cubert Mine	12½	23
2048	Dartmoor Consols	2	4
7100	Derwent	8½	5
1024	Devon&CourtenayCon.	6	3½
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
256	East Alvenney	6	10
112	East Caradon	42	42
2048	East Crowndale	4½	1½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	40
100	East Rolistian	22	40
9000	East Tamar Consols	1½	2
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	250
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1300
2048	East Wh. Rough Tor	½	2
—	East of Scotland Iron Co.	2½	1½
123	East Wheal Seton	14	20
256	Elborough	1½	2½
256	Exmoor Wh. Eliza	3½	11
512	Fowey Consols	40	45
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	2	1½
2048	Georgia Tin Mines	1½	1½
256	Gonamena	31½	70
128	Goonvrea	4	1½
244	Grambler & St. Aubyn	—	12
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	3
256	Great Resugga Moor	3	3½
512	Gt. Wh. Rough Tor Con.	6½	30
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	25
1000	Hanson	14	2
1000	Harrowbarrow Old Mine	8½	2
800	Hawkmoor	3	2
6000	Heigaston Down Con.	½	2½
256	Herodscombe	2½	12
256	Herodsfoot	14	20
10000	Hibernian	12½	1½
—	Hobb's Hill	4	3
1000	Holmbush	19	6
827	Kirkcudbrightshire	5½	8
2048	Lamheroe Wh. Maria	10	3
2048	Lanivet Consols	4	2½
300	Larkholes	1	3
128	Lelant Consols	90	60
160	Levant	—	90
1000	Lewis	15	6½
1280	Llancynfelin	6	—
1000	Llwyn Maices	5	—
3600	Llynvi Iron	50	60–65
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
6000	Marke Valley	10	3
5000	Mendip Hills	2½	1½
5000	Merionethshire Slate & Slate Slab Co.	1½	2½–2¾
20000	Mining Co. of Ireland	7	6½
256	New East Crowndale	3½	3½
128	North Fowey Consols	25	20
100	North Pool	45	320
70	North Roskear	10½	400
512	North Treburget	2	3
100	North United	72	15
256	North Wh. Abraham	½	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	8
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
128	Par Consols	900	1000
256	Penhallow Moor	15	4
4000	Pennant	1½	2½
100	Penriliw	30	65
256	Pentuan Wheal Mary	2½	6
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	15
512	Plymouth Wh. Yeoland	4½	20
256	Polsaith Consols	2	4
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	2
10000	Rhymney Iron	50	30
10000	Ditto New	7	6½
256	Rose Consols	10	12
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
—	Shotts Iron Company	50	65
2500	Silver Valley	5	2
128	South Caradon	10	450

BRITISH MINES—continued.

Shares.	Company.	Paid.	Price.
3000	South Dolcoath	2	2
256	Sth. Friendsh. Wh. Ann	16	14
200	South Harvannah	10	25
9000	South Tamar	¼	⅛
256	South Tolgus	3½	18
800	South Towan	10	1½
256	South Trelawney	16½	10
128	South Yeoland	16½	20
128	South Wheal Basset	110	65–70
124	South Wh. Francis	160	210
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2½
256	South Wheal Rose	11½	1
10000	Southern&Western, Irish	2	4–3
280	Spearne Moor	30	40
256	St. Austell Consols	9	14
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
1000	Stray Park	43	30
9600	Tamar Consols	5	5½
1024	Tavy Consols	5	4½
6000	Tincroft	7	8
1000	Tin Vale Consols	2	2½
256	Ting Tang	15	10
128	Tokenbury	143½	10
256	Trehane	2	24
5000	Treleigh Consols	6	4½
2000	Trenance	2	—
256	Trenow Consols	30	15
96	Tresavean	10	250
120	Trethellan	5	27½
120	Treviskey and Barrier	130	150
288	Trevean	½	25
256	Trewollack	20	10
128	Trewellard	12	26½
6000	United Hills	5	¾
160	United Mines	300	350
256	Wellington Mines	15	30
128	West Basset	45	28
256	West Caradon	20	168
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	1	20
200	West Seton	40	72
—	West of Scotland Iron Co.	210	212
120	West Trethellan	5	35
256	West United Hills	2½	4
256	West Wh. Friendship	7½	3
3845	West Wheal Jewel	11	1½
2560	West Wh. Maria	1½	¾
256	West Wheal Rough Tor	½	2
256	West Wheal Shepherd	5	2½
256	West Wheal Tolgus	21½	2
256	West Wheal Treasury	19	10
5200	Wicklow Copper	5	12
164	Wheal Adams	41	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	2	5
237	Wheal Anderton	16½	26
128	Wheal Ann	—	50½
128	Wheal Arvose	3½	4
1024	Wheal Ash	3	12
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	3
256	Wheal Benny	6½	5
256	Wheal Blencowe	8	10
256	Wheal Bucketts	20	22
256	Wheal Byon Consols	½	¼
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	¼
256	Wheal Dyke	12	13
256	Wheal Fortescue	5½	8
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	40
1024	Wheal Grace	3	2½
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
256	Wheal Kekewich	4	4
256	Wheal Louisa	7½	12
112	Wheal Margaret	79	250
256	Wheal Maria (Ilayle)	19	12
1024	Wheal Maria	1	250
4000	Wheal Martha Consols	5	2
512	Wheal Mary Ann	5	24
256	Wheal Mary Consols	38	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	7
120	Wheal Reeth	27	30
128	Wheal Rose	60	45
2048	Wheal Samson	—	20
99	Wheal Seton	214	850
256	Wheal Sisters	29½	35
256	Wheal Sophia	3½	10
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
360	Wheal Trelawney	7½	112
256	Wh. Tremaine(St. Ervan)	1½	20
256	Wheal Tremayne	35	30
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	265
128	Wheal Venland	12½	10
256	Wheal Vlow (Perranz.)	⅛	⅛
184	Wheal Vyvyan	—	60
256	Wheal Williams	6	18

FOREIGN MINES.

8000	Alten Mining Company	14½	3⅝
15000	Asturian Mining Co.	10	7½
20000	Australian	2	5
10000	Anglo-Mexican Co.	100	2
12374	Ditto Subscription	25	2½
3000	Bolanos	150	6½
2000	Ditto Scrip	15	6½
12000	Brazilian Imperial	22	7
10000	Cobre Copper Co.	40	18
8500	Colombian Co. regis.	55	1
5000	Ditto Scrip	5½	
5000	Copiapo Mining Co.	14	3
10000	General Mining Ass'n.	20	15½
5000	Kinzigthal Mining Ass.	2	2½
20051	Mexican Company	59	—
2000	Mexican & South Amer.	7	3
5000	Mocaubas & Cocaes	25	4½–5
29320	Rl. del Monte, regis.	28½	av. 2
	Ditto unregistered		
	Ditto Red Debentures	—	20
	Ditto Black ditto	—	14
	Ditto Loan Notes	150	97½
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	6½
43174	United Mexican	28½	2

SOUTH AUSTRALIA AND NEW ZEALAND.

100000	North British Australasian (Kaw-aw &c.)	1	1

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Davison's West Hartley 16 6—Dean's Primrose 15 9—Delaval Hartley 15 6—Holywell Main 16 6—Original Tanfield 15 6—Ord's Redheugh 15 6—Ravensworth West Hartley 16 6—Tanfield Moor 17 6—West Hartley 16 6—Wall's End Bewicke and Co. 16 9—Gosforth 16 9—Heaton 16 9—Hedworth 15 6—Eden Main 17 6—East Hetton 16 9—Hetton 18 6—Stewart's 18 6—Heugh Hall 17—Adelaide 17 6—South Durham 16 9—Seymour Tees 17—Tees 18 3—Cowpen Hartley 16 6—Derwentwater Hartley 16—Howard's West Hartley Netherton 16 6—Sydney's Hartley 16 6.—Ships at market, 101.

WEDNESDAY.—Adair's Main 15 6—Carr's Hartley 16 6—Chester Main 15 9—Davison's West Hartley 16 6—Dean's Primrose 15 9—Delaval Hartley 15 6—Hasting's Hartley 16 6—Holywell Main 16 6—Ord's Redheugh 15 6—South Pearth 15 3—Tanfield Moor 17 6—Townley 15 6—West Hartley 16 6—Wylam 16—Eden Main 17 7—Cowpen Hartley 16 6—Derwentwater Hartley 16—Dipton Coke 26 6—Howard's West Hartley Netherton 16 6—Sidney's Hartley 16 6—Wall's End Acorn Close 16 9—Bewicke and Co. 16 9—Burnhope 16 6—Hilda 16 6—Killingworth 16 9—Riddell 16 9—Braddyll's Hetton 18 3—Haswell 18 9 to 19—Hetton 18 6—Keepier 18—Russell Hetton 18—Shotton 17 9—Stewart's 18 6—Hudson's Hartlepool 17 6—High Thornley 15 7—Kelloe 18—South Kelloe 17—Adelaide 17 6—Cowndon Tees 16 9—Leasingthorne 17 3—Tees 18 3.—Ships at market, 148; sold, 79; unsold, 69.

FRIDAY.—Adair's Main 15 6—Carr's Hartley 16 6—Chester Main 16—Davison's West Hartley 16 6—Holywell Main 16 6—West Hartley 16 6—Wylam 16—Anthracite 26 6—Derwentwater Hartley 16—James and Aubrey Stone Coal 26—Wall's End Belmont 17 6—Braddyll's Hetton 18 3—East Hetton 16 9—Haswell 19—Hetton 18 9—Lambton 18 3—Russell's Hetton 18 3—Stewart's 18 9—Whitwell 16 9—High Thornley 16—Kelloe 16—Adelaide 17 6—Cowndon Tees 16 9—South Durham 16 9—Seymour Tees 17 3—Tees 18 3.—Ships at market, 91; sold, 70; unsold, 21.

LEAD ORES

Sold at Aberystwith, on the 26th July, 1847.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Goginan	80	£15 4 6	Sims, Willyams, and Co.
ditto	30	14 13 6	Newton, Keates, & Co.
East Logylas	53	11 10 0	Sims, Willyams, and Co.
Frongoch	50	11 5 0	ditto

Sold at Holywell, on the 29th July, 1847.

Penyrherbias	50	£11 0 0	Walker, Parker, & Co.
ditto	50	11 0 0	ditto
ditto	40	11 0 0	ditto
Westminster	63	9 16 6	Newton, Keates, & Co.
ditto	32	10 10 0	Walker, Parker, & Co.
Belgrave	25	10 6 0	Newton, Keates, & Co.
Jamaica	50	10 11 6	ditto
Bwlchryddarfryn	10	10 7 6	Walker, Parker, & Co.
Halkin Hall	8	9 16 6	Newton, Keates, & Co.
Pwllclen	6	10 7 6	Walker, Parker, & Co.
Panten	1	9 16 0	ditto

Sold at Holywell, on the 30th July, 1847.

Cwmystwith	56	£10 3 0	Walker and Co.

Sold at Aberystwith, on the 31st July, 1847.

Llanfair	25	£25 3 6	ditto

Sold at Liskeard, on the 31st July, 1847.

Trelawney	80	£14 3 6	ditto

Sold at Holywell, on the 4th August, 1847.

Machynlleth	55	£11 3 0	Newton, Keates, & Co.

SILVER-LEAD ORE.

Tenders for (computed) 107 tons ore, from the CALLINGTON MINE, *were opened at the Offices, Finsbury-square, on the 4th inst., 1847.*

Firms.	*Price per ton.*
Walker, Parker, and Co.	£19 3 6
Mullins, Brothers	18 10 0
Tamar Smelting Company	17 17 0
Newton and Co.	17 3 0
Michell and Co.	17 1 6
Sims, Willyams, Nevill, and Co.	14 9 6

No tenders from B. Somers, or J. T. Treffry, Esqs., or from the Combmartin Company.

Particulars of Two Parcels of Silver-Lead Ore, purchased by the Tamar Smelting Company, of the Coombe Vale Consols Mining Company:—

	Cwt. qrs. lbs.	*Price per Ton.*	*Amount.*	*Total.*
No. 1	14 1 8	£29 5 0	£19 18 11	
No. 2	3 0 21	22 3 0	3 7 3	£23 6 2

BLACK TIN.

Mines.	*Tons.*	*Price per ton.*	*Purchasers.*
Birch Tor	8½	£41 19 6	Daubus & Calcnick Co.
Silver Valley	3½	33 12 6	Williams and Co.
ditto	31	31 10 0	ditto
Great Polgooth	1	48 0 0	Calenick Co. & Williams.
ditto	24	45 10 0	Calenick Smelting Co.
	2		

COPPER ORES.

Sampled July 21, and Sold at Tyack's Hotel, Camborne, August 5, 1847..

Mines.	*Tons.*	*Price.*
Camborne Vean	86	£5 6 6
ditto	81	5 6 6
ditto	78	2 7 0
ditto	70	3 16 0
ditto	67	5 19 0
ditto	65	8 13 0
ditto	63	6 8 0
ditto	47	5 14 0
ditto	43	4 9 0
ditto	42	7 4 0
Wh. Seton	101	5 16 0
ditto	94	6 16 6
ditto	84	6 8 6
ditto	83	5 15 6
ditto	82	6 7 0
ditto	64	7 4 0
ditto	61	7 6 0
ditto	46	6 2 0
ditto	20	2 6 0
North Pool	114	5 6 6
ditto	98	5 11 6
ditto	96	5 12 6
ditto	82	4 18 0
ditto	81	4 19 6
ditto	69	9 9 6
ditto	63	4 3 6
East Wh. Crofty	114	4 19 0
ditto	112	5 18 6
ditto	83	4 14 6
ditto	61	4 18 0
ditto	41	5 18 6
ditto	36	2 13 0
ditto	35	1 5 6
Longclose	59	5 16 6
Dudnance	40	8 11 0
Tincroft	91	3 11 6
ditto	89	5 4 6
ditto	73	4 10 6
ditto	70	5 2 6
ditto	45	2 11 0

Mines.	*Tons.*	*Price.*
Tincroft	43	£3 18 0
ditto	41	6 11 0
ditto	40	2 7 6
ditto	27	3 14 0
ditto	26	4 0 0
Dolcoath	93	7 3 6
ditto	70	4 12 0
ditto	64	1 10 6
ditto	63	0 3 6
ditto	59	5 8 0
ditto	23	0 8 6
Fowey Consols	108	6 5 0
ditto	102	7 7 6
ditto	90	5 0 6
South Wh. Basset	61	3 9 0
ditto	55	6 14 0
ditto	54	5 6 0
ditto	41	5 10 6
ditto	36	9 8 0
ditto	7	2 10 0
South Wh. Francis	98	4 3 6
ditto	78	11 19 6
ditto	65	11 17 0
Condurrow	73	4 17 6
ditto	72	5 0 6
ditto	48	2 13 0
ditto	29	4 5 0
Wh. Bucketts	67	3 11 0
ditto	43	3 17 0
ditto	25	9 1 6
East Pool	45	6 1 0
ditto	30	2 4 0
ditto	19	3 9 0
Lanivet Consols	72	5 7 6
ditto	16	3 0 6
Wh. Vyvyan	35	0 10 6
ditto	27	7

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

Perran St. George.—The communication of "A Miner" (Perranzabuloe), can only be inserted with the writer's name attached. We do not have the agent's reports furnished us, or we should insert them: we have no opportunity of ascertaining the amount of returns per month—consequently, cannot say if our correspondent's estimate (700*l.* to 800*l.*) be accurate, or that the amount, as he states, does not leave a profit. We quite agree with "A Miner," in stating—"However respectable and wealthy a company may be, and however judiciously and secretly its affairs are conducted, occasional publicity could do no harm, but would be setting a good example to other companies, not to keep back any thing from public examination." * * * * "There is another circumstance connected with this company, which creates a degree of surprise in my mind, and that is, how the Perran St. George Company can possibly content themselves to work no deeper than the 60 fm. level—even if they are making a little profit at that level—when there are such spacious resources before them for augmenting that profit, by a trifling outlay to work the mine deeper."

The letter of "A Shareholder in the United Mexican Mining Association," shall appear in our next.

Coombe Tin Mines.—A correspondent wishes us to caution parties from hurriedly embarking in this undertaking: he asserts, that the intended lease, when granted, will be valueless, as it will come from an unauthorised source, and that the lodes have been already raked by the old tinners. As an instance of the absurdity of the statement, so repeatedly put forth on introducing a new scheme, of the old men leaving off just when they had met with the richest indications, our correspondent says—"Good stones of tin may be found in any of the old tin mines. If the London capitalists think that the old miners merely scratched the ore away a few fathoms in depth, and then left the wealth in sight (as the speculators describe), through ignorance of the use of machinery, they will be mistaken. At Drake Walls Mine, in the parish of Calstock, the old men's workings are found to be 90 fms. deep—then, why not at Coombe and other Dartmoor mines, said to be merely scratched over?" * * * * "It is as common now, for some 'Cousin Jackey,' to put on his best 'bib-and-tucker,' take a few stones of ore, and set off for town, as it was to go underground, his proper place. It is nothing new now, for the pick, gad, hard hat, and striped horse-cloth jacket, to be supplanted with a gold watch and chain, fine broad-cloth, and a cigar, by a trip or two to London."

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, AUGUST 7, 1847.

Whatever mystery may exist as regards the *standard* of copper ores, calculated at the ticketings in Cornwall and at Swansea, the *returning charges*, and other details, in estimating the value of the produce, known only to the initiated, the system in general as adopted, gives satisfaction to the producers of ore, from there being at *least* a semblance of public competition, even should there be some little private understanding among the smelters themselves, previous to sending in their tenders. Not so with lead; the system, which has been in practice from time immemorial, at Holywell, of purchasing the ores by private contract, has given the smelters an immense advantage at the expense of the mine adventurer—the latter neither obtaining a fair price for his commodity, simply as lead ore, nor for the actual proportion of silver which that ore contains. Nothing can be more conclusive as to the enormous advantages which the lead smelters obtain under the present hole-and-corner system, by which small holders, in particular, are driven to force a market, and take what is offered, than the fact, as we stated in some remarks on the 10th ult., and which we defy the lead smelters to gainsay, that a fall in the price of some ores has taken place to the extent of 20 per cent. in the last three months—while there has been no corresponding fall in either lead or silver. We cannot believe that this system will be allowed longer to exist. In Devon and Cornwall, already do parties, having no smelting-works of their own, put their silver-lead ores up to public tender; and a most important announcement appears in our advertising columns—viz.: that all the lead ores raised on the Greenwich Hospital estates, in the manor of Alston, Cumberland, are henceforth to be sold in the same public manner—thus putting them to fair competition, by which only can the owners expect to obtain a fair and reasonable price. We should think the Welsh lead mine proprietors will no longer put up with this wholesale depreciation of their property; but at once adopt a system which is certainly in their power, and which well-tried experience proves is the only means of obtaining remunerative prices, and under which there will be no necessity or temptation of forced sales and impoverished returns.

The establishment of Mining and Engineering Schools in the mineral departments has, for some time, attracted the particular attention of the French Government; and M. Dumont (the ex-Minister of Public Works), has done much towards their erection: he was the first to propose them to the consideration of the Chambers, applying for the necessary means for their foundation, and which have been always, we are pleased to learn, granted without opposition. The Royal School of Mines of Paris is considered one of the best scientific establishments of that capital; but, as mining progresses, the study of it, in all its branches, becomes the more imperative. Schools of Mines and Engineering are about being established in the departments of the Loire, Rhone, &c.; one at Orleans and Lyons, which will embrace the whole of that district; one at Montpelier and Bordeaux; one at Douai, which will embrace the departments of the north, comprising the mining districts of Mons, Valenciennes, &c.; one in the department of Sambre and Meuse, and the Upper and Lower Rhine, &c. The professors in the mining and engineering branches will be men of first-rate talent and experience in both sciences, with good salaries; the buildings will be fitted up on a large scale, with commodious lecture-rooms, model-rooms, and libraries, containing the best works on mining and engineering: to French, and other languages, the pupils will be admitted *gratis*; and, after having undergone the different degrees of study, both practical and theoretical, in every portion of each branch, they will have diplomas, or certificates, granted to them, either as miners or civil engineers. The first will comprise mineralogy, geology, and all the best systems as yet adopted in every country in mining operations, a chemical knowledge of the various ores and strata, the sinking of shafts, driving of adits, the clearing off the water, and the principles of pneumatic and steam-power, ventilation of mines—in fact, every part connected with exploring, blasting with powder and gun-cotton, and all modern improvements in the science; the making of the various metals, &c. The second will comprise railway surveying, levelling, &c., land and estate engineering, Government surveying, geological and marine surveying, the construction of locomotives, railways, and all the requisite materials appertaining to railway cutting, embanking, tunnelling, bridges, and viaducts, the different gauges, &c., the construction of ships (wood and iron), steam-engines for marine purposes, &c.

Although the education will be gratis, a certain number of the students can be boarded and lodged in the institution at a moderate sum per annum. Such establishments as the above in this country is a desideratum; as, were there mining schools in Cornwall, Wales, Staffordshire, and other mining districts, they would be the means of rendering a great advantage to the development of the science among many who are very deficient in a thorough knowledge of it. The Austrian Mining Colleges have existed for many years, at which many celebrated men have been educated. The miners in that country enjoy peculiar privileges—exempt from serving in the army and navy, and free of taxes; they form a distinct class from their fellowmen. Notwithstanding the privileges they enjoy, they are under the protection, or, more properly speaking, the authority, of the Government, and cannot leave without having previously obtained permission from the Minister of Public Works and the President of the Mining Department. At St. Petersburgh, there is also an Imperial College of Mines; in Prussia and Belgium there are several in the mining districts at Liege, Brussels, Berlin, &c. At Madrid, Rio Janeiro, the Brazils, Havana, Mexico, Bogota, Chili, and Peru, mining colleges are established on an extensive scale—whilst, strange as it may appear, England, one of the most important metallic countries in the world, has no such institution for educating those who intend to devote themselves to mining pursuits.

In our remarks last week, on the annual returns of the imports and exports of copper, copper ore, and brass, we particularly noticed the falling off which had taken place in the exports of foreign copper, and showed how they had increased from 1726 tons in 1833 to 10,046 in 1842. The following are the amounts for the several intermediate years:—1834, 1727 tons; 1835, 3117 tons; 1836, 2049 tons; 1837, 5725 tons; 1838, 5619 tons; 1839, 6205 tons; 1840, 7981 tons; 1841, 10,657 tons; and 1842, 10,046 tons, from which date they suddenly fell to comparative nothing. The following shows the great and gradual increase of foreign ore smelted in bond up to 1842:—1829, 1053 tons; 1830, 1151 tons; 1831, 2248 tons; 1832, 3516 tons; 1833, 5680 tons; 1834, 6986 tons; 1835, 13,858 tons; 1836, 18,363 tons; 1837, 19,463 tons; 1838, 26,916 tons; 1839, 30,000 tons; 1840, 41,942 tons; 1841, 48,507 tons; and 1842, 34,044 tons. Be it remembered, that the alteration of the duty took place in July, 1842, which accounts for the small quantity in that year. In whatever part of this return we look, the same undeniable evidence is afforded of the effect of the duty of 1842 on our copper trade; and in spite of the long-winded epistles in the *Cornwall Gazette*, and the sophistry they contain in favour of the duties, the majority of the public who think about, or are at all interested in, the subject, are unanimously in favour of an immediate, unconditional, and total repeal.

It was not without considerable pain, that we noticed the unfortunate circumstances under which a large body of Irish emigrants recently landed in Canada. The heavy clouds which at the moment rested on the shores of their own noble island, must be received as an extenuation for the imprudent manner of their departure. A fearful famine at the time was brooding above the wonted fertility of their green homes; and they were driven, by a strong instinct, to seek in the wide-spread and unappropriated regions of British America those elements of life and competency, of which there was, for a season, a melancholy deficiency at home. In the excitement of an extraordinary crisis they had forgotten, that, in escaping from one wreck, they might, by the force of events, be flung on another equally dangerous; and so it has turned out: they have, with an inexpedient haste, quitted the banks of the Shannon, and they found the shores of the St. Lawrence quite as inhospitable—having embarked in utter disregard, and in thorough destitution, of all arrangements and means, that can make a change of place, and a new application of labour, beneficial. From mismanagement chiefly, on their arrival, they were a thousand times more fit to fill the hospitals of the colony, than to make war upon its primeval forests.

Deploring the results in this case, we must not be understood to depreciate the utility of emigration generally upon an adequate scale, and under well-considered circumstances. We think it, under such limitations, a just and judicious means of absorbing the exuberant populations of these islands; but then the numbers, the age, the occupation, the material means, and the locating of every body of emigrants, should be settled in their minutest particulars, before a single vessel stands out of a British port, with so precious a freight-age as British emigrants to a distant hemisphere. So conducted emigration might largely benefit the parent isles, as well as the regions to which the children betook themselves; and without taking these preliminary elements into the account, the results will often be of a piece with the one we have now in view.

The question as whole is beside the general purposes of this Journal; nor should we in all probability have dwelt on the subject at all, but for some intimations we have noticed of an intention on the part of persons in the middle and eastern districts of Cornwall of committing themselves to an enterprise of this kind. We trust they will look at the matter dispassionately, and take a calm view of their real prospects at home, as well as of those they can reasonably hope to realise by quitting it. Of this one thing we are absolutely confident, that the same amount of capital, the same degree of labour, assiduity, and patience, which are indispensable in every parallel of the American continent, and in every island, Australian or Polynesian, of the great Pacific, would be productive of results equally favourable, if devoted to agriculture, to commerce, to mining, or to business in any of its forms, within the circle of these imperial isles.

In our city article, in last week's *Mining Journal*, we expressed surprise at a call being made of 5*l.* per share, with a heavy balance against the shareholders, in Wheal Maria Tin Mine, when all parties in London were in expectation of a 5*l.* dividend at the end of August. We also expressed a hope that the purser would give a more satisfactory account of the increased expenditure. We have received a very full statement from Capts. William Semmens and Peter Pascoe, which will be found in another column, in which they give a full and detailed statement of the accounts, showing, that after paying for new calciner, wheel, stamps, and everything connected with their fixing, the debt against the mine, on the six months' account, is 218*l.* 14*s.* 4*d.*; while the fall of the price of tin in that period has been upwards of 400*l.* With respect to the robbery of tin, and the systematic manner in which it must have been carried on, we cannot help thinking there has been some degree of remissness somewhere; for, while the new calciner was erecting, and under the circumstances, still greater vigilance should have been exercised—more particularly, as both agents acknowledge that they had suspicion that all was not right.

The meeting of the Compressed-Air Engine Company, held this week, was rather of an unaccountable nature, and was far from being unanimous. The directors appear to have dismissed their engineer—a gentleman engaged to develope the principle of his own patent—supposing them to be capable of such an act, who would they venture to appoint in his place? Amidst this squabble of patentee and directors, we fear this novel machine will not get fair-play, so as to test its efficacy. The directors have devoted, it appears, during 18 months, 500*l.* towards the reservoir; and they now hesitate to pay for pumps necessary to test its efficacy, whilst they exhibit a balance-sheet, in which about 3200*l.* figure as law charges, furniture, salaries, &c.!! The appointment of a committee of five to go into the affairs of the company, we consider a *veto* upon the conduct of the directors; and we hope, by their instrumentality, to see Mr. Parsey have that control over the building of the apparatus to which he has been denied, and every facility given him to test whether this invention of his be a *bubble*, or of public utility, which can never be the case, whilst the directors persist in being more sapient than the patentee himself.

Rhymney Iron Company.—It is with regret we announce the demise of Francis Rougemont, Esq., one of the directors of this company; while we are given to understand, that an early meeting of the shareholders will be held, for the appointment of a gentleman in his stead. Mr. Coles Child has already announced his intention of becoming a candidate to fill the vacant office; and from the services rendered by that gentleman on a late occasion, and his general knowledge of the affairs of the company, there appears to be but little doubt of his election on the part of the proprietors, whose interests he has so carefully watched, and which have been so generally acknowledged, by those possessing the best means of forming a judgment.

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

In our columns of last week, we reported the proceedings at the annual general meeting of the shareholders in this company, when a report from the directors was submitted, and a dividend declared, after the rate of 12½ per cent. The report then read was considered highly satisfactory, and the meeting separated in good spirits, entertaining high expectations of future results, judging from the past workings, which, as explained, are confined to a limited scale, until the railway shall have been completed. The shareholders, it appears, following in the steps of the Cornish adventurers, thought that upon such an occasion they should at least indulge in those social feelings and kindly brotherhood, which invariably pertain to a mine meeting, when accompanied by a count-house dinner. Col. Cameron, with a spirit of liberality, which we have no hesitation in saying is duly appreciated, as the lord, or lessor, of the collieries, at once invited the shareholders to meet him at the Guildhall Coffee-House on Tuesday last, reckoning on the directors, or shareholders, following the example set them, on the next occasion of a dividend being declared.

Accordingly, the meeting of shareholders was held—Colonel Cameron in the chair—when after the usual loyal toasts having been drank, Captain Hamilton Earle, R.A., rose to propose the health of Colonel Cameron, and entered at some length, not only into the merits of that gentleman, but also as to the prospects which the colliery presented—while the results, after the very limited period which the works had been carried on, were such as to be highly encouraging.

Col. Cameron, in returning thanks, observed, that his heart was earnest in the cause—that he was delighted to find the directors of the company had so well fulfilled their duties as to be enabled to declare a dividend to the extent they had, out of the profits of the collieries—while he felt assured, upon their being opened more extensively, and the railroad constructed, the shareholders would reap far greater advantages than those now realised. He (the chairman) thanked them for their co-operation; and would propose the health of Mr. Smallbone, to whom he considered the company much indebted, not only for the services rendered by that gentleman, but the interest he had ever manifested, in promoting the objects and success of the company.

Mr. Smallbone expressed his thanks to the meeting, at the sametime signifying his conviction that the property was of a highly important and valuable nature.

The usual toasts, including the healths of Sir A. P. Green (vice-chairman), Messrs. W. W. Cooper (barrister), and E. Elderton (solicitor), Mr. J. J. Atkinson (manager), Mr. Masters (shipping agent), and Mr. Howden (the secretary), were drank in the course of the evening with the usual honours.

Mr. Howden, in returning thanks, begged to convey to the gentlemen assembled his thanks, and the pleasure he derived from being associated with gentlemen of business habits and application, such as then surrounded him. He might take that opportunity of observing that, during the past nine days, no less than 1365 tons of coal had been loaded from their collieries at the port of Swansea.

It is not our province to report proceedings at convivial meetings like the present; but as it might be said to partake of a business-like character, we gladly give some rough notes, doubting not but that other associations, of a like nature, will follow the example so well set by the honourable colonel, who is lessor of the property.

RAMBLES THROUGH SOUTH WALES—No. I.

Steam Power *v.* Water Wheels.—Rambling for a few days round the delightful scenery of the Devil's Bridge, I entered the great lead mining district, and, amongst other mines, passed through that of Frongoch, but was much surprised to find the machinery at rest. On inquiring how this scene of bustle, which I had formerly witnessed, had become so apparently desolate, I was informed that the reservoirs had run out; and that, for want of surface water, the mine was inundated below—and, my informant added, it is probable that the bottom of the mine would not be drained before after the season of frost had passed. Knowing that this species of abandonment must naturally be of serious importance to the mining company, as well as to the labourers of this part of the country, I asked, was it not possible to remedy this state of things by means of steam power? when my informant told me, that a powerful steam-engine had been erected, of which he pointed out to me the now-deserted house, stack, &c., and added, that when this engine was erected, the management was in other hands; but that the new management, miscalculating the supply of water, had removed the engine, and hence the dilemma in which the undertaking was fixed. It appeared to me to be a pity, that so much derangement, and so much poverty, should be consequent upon a want of knowledge of correct calculation and principles; and I thought, as I wandered back to the surprising cascades of the Bridge of the Devil, that it would after all be cheaper for the company to pay high for a competent engineer, than to have their prospects of success frustrated by such lack of engineering talent.

College for Civil Engineers, Putney.—In his address to the Council of Administration, at the annual meeting of the College, on the 12th ult., the Rev. M. Cowie, M.A., principal, alluded to the increased stability of the institution, the firm and steady growth which its affairs exhibited, and, particularly, to the objects which the founders had in view—to provide for the rising generation a means of obtaining instruction in sound scientific principles, while, at the same time, they were acquiring that knowledge which practice alone could impart. He particularly dwelt on the necessity of combining practice with sound theory of the immutable laws of Nature; and the opportunities which were continually given the students, of witnessing the progress of railways, and other great scientific undertakings, which they had read of, and had explained to them; and they thus *saw* the operations being carried out in practice. They had pattern-makers, fitters, vice-men, moulders, and smiths, constantly at work on the premises, executing works, such as might be seen in the more extensive workshops of the large engineers—thereby supplying them with that knowledge which actual practice gives; while they obtain constant instruction in the principles which guide each operation. He urged that all young men seeking employment, who had been educated at the College, should be pressed for their certificate; and, if they had none to show, it was fair to conclude they were incompetent, as certificates were granted to none but those whose examination proved them capable of undertaking such works as might be entrusted to young men with certainty of giving satisfaction to their employers.

Coal in India.—We understand that the labours of Mr. Williams, the surveyor of the mining districts of India, have resulted in the discovery of a very valuable seam of coal, superior in geological position to those which have been hitherto working, and one which will afford "coking coal" of very superior quality, especially adapted to the use of locomotive engines. This discovery sets at rest the discussion which had arisen regarding the value of the Burdwan coal-field, which, as Mr. Williams had asserted some time since, contained coal of very superior quality, but which, according to the opinion of others, who had paid some little attention to the subject, had already been fully explored. We cannot but congratulate Mr. Williams on this discovery—establishing the truth of what he some time since fearlessly asserted regarding the value of the Burdwan coal-bearing strata; and we are glad to find that the Government has so soon reaped the fruits of procuring the services of a thorough practical miner. We learn too, that machinery has been recently sent up the Damoada, which will afford Mr. Williams every opportunity for prosecuting labours so very important to the interests of the country.—*Bomb. Times, June* 19.

Salt (East India).—Returns moved for in the last Parliament by the ex-member for Taunton, Sir E. Colebrook, show that the total quantity of salt sold in Bengal, in bazaar maunds, amounted in 1844-45, to 46,44,046 bazaar maunds, which appears to have been the general average for the last 10 years. The total net revenue of the Bengal salt monopoly amounted in 1844-45, to 1,487,032*l.*, against 1,441,845*l.* in the preceding year. The total quantity of salt imported into Bengal in 1844-45, amounted to 9,70,646 bazaar maunds, and the value thereof to 40,42,642 rupees.

Public Record Office.—We hear that Sir George Grey having referred the question of the proposed site for the Public Record Office in Chancery-lane to the Metropolitan Commissioners, they have reported in favour of its adoption. They add an opinion, that the building of the new repository is calculated to be conducive to other extensive improvements in the neighbourhood in question. Surely the question may be considered as now near its decision, and no further time will be lost in relieving the public records from their present perilous position.—*Pa. Jourl.*

New Iron-Works at Saltney Station, near Chester.—On Friday week, the first stone of an extensive establishment for the manufacture of anchors, chain cables, scrap forged iron for ship and engine use, and various other descriptions of iron work, was laid by the lady of Mr. H. Wood, of Birkenhead. The works are being erected by Messrs. Wood Brothers, of Stourbridge and Liverpool, and are intended to cover three or four acres of land, and will shortly employ several hundred men, much to the advantage of the ancient city of Chester.—*Birmingham Advertiser.*

NEW PATENTS.

H. Sandeman, Tulloch Bleachfield, Perth, bleacher, for certain improvements in the materials and processes employed in dressing, cleaning, scouring, and bleaching certain textile fabrics, and the materials of which such fabrics are composed.

J. Yule, Sauchiehall-street, Glasgow, practical engineer, for certain improvements in chairs used on railways, and in the fixing of the same.

J. Bourne, Derby, Derbyshire, for improvements in the construction of kilns for burning stoneware and brownware.

A. Boyle, Birmingham, for improvements in the manufacture of buttons.

J. Sinister, Birmingham, for improvements in the manufacture of stays and belts.

W. Broadbent, Manchester, for improvements in the manufacture of paper.

T. Birchall, Ribbleton Hall, Lancaster, for improvements in folding newspapers and other papers.

T. Fletcher, Birmingham, brass-founder, for an improved manufacture of specula for various purposes.—*Mechanics' Magazine.*

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Messieurs Henry, the famous concoctors of the Company of the Algerian Mines of Mouzaïa, have published a note, in which they declare that their project of raising a capital of 20,000,000 fr., and of awarding themselves the lion's share, as also well-paid places in the company, with the right of hereditary succession to their descendants, was only a project never attempted to be realised; but even if that be the case, what can be thought of the honesty of men who could deliberately put forth such a scandalous scheme? With respect to the dispute between them, and a M. Rambourg, as to the real price of certain shares, which Rambourg contended he had bought and paid for, under the belief that they were of 500 fr. each, whereas they were only of 100 fr.—whilst Messieurs Henry contended that he knew that the shares were only 100 fr., and that he gave the additional 400 fr. as premium—the Court decided against the Henrys, and ordered them to repay the 400 fr. per share. The statement of shares in the Mouzaïa Mines having attained 400 fr. premium—fourfold their actual value—in the course of a few months, is a piece of audacity of which none but speculators in Algerian mines would dare to be guilty. According to their own account, the mines, which may yield gold, silver, and copper, are in the midst of mountains; and a road has had to be cut out of the solid rock, to enable even the mule and the ass to reach them—whilst they are in continual danger of being seized by the Arabs!

I perceive that the present managers of these mines have written to one of the newspapers to complain of the statements that were made respecting them, on the hearing of the Henry and Rambourg dispute before the law court; and they took the opportunity of puffing off the mines, and vaunting the large returns which they say they have already made. I have been called on to lay before you a translation of this letter; but, before doing so, I wish to institute certain inquiries. Without meaning any disrespect to the present managers, I may say that the awkward disclosures that have been made, warrant one in not placing implicit reliance on the statements of any person having a pecuniary interest in the mines.

It really appears that the most scandalous corruption has been, and even is, carried on with respect to mines. The bye-laws of the famous Gouhenans Company contained a clause authorising two of the principal shareholders to employ a certain sum of money without giving any account of it. The bye-laws of the Mouzaïa Mines contained, and I believe still contains, a similar clause; and now it turns out that the bye-laws of the Company of the Salt Mines of Saltzbrona contain one precisely similar! By-and-bye, no doubt, we shall hear that the bye-laws of every mining company in the country contain the same recital.

The French brag incessantly of the progress they have made, and are making, in building locomotives and steam-engines; and they look sanguinely forward to the day when they will be able to get rid of the necessity of making imports from England. The articles they turn out, however, seem to be sorry things. For example, the newspapers of this very morning contain an account of the recent explosion of the boilers of the *Comte d'Eu* steamer, which were constructed in their crack establishment—the Creuzot—and were vaunted as the best specimen of what that best of French establishments could turn out. Ten poor wretches were killed by the explosion, and 10 others were very grievously injured. In one respect, certainly, the French engine-builders beat ours all to nothing, and that respect would be accurately described if they would write "Warranted to burst or break" on all the articles they manufacture!

The *Union* of St. Etienne, of last Sunday, announces that the Great Coal Company of the Loire has just dismissed between 400 and 500 of its men. The report that it had done so was current last week; but, as I told you in my last, was then unfounded. It is, I think, to be regretted that the company should have taken such a step, if only because it increases the already intense prejudice with which it is regarded at St. Etienne, and in the neighbourhood. Certainly, there were suspensions of work, and frequent ones too, before the company formed its great monopoly; but the company took a sort of engagement that under it the miners should find constant employment; and with the immense extent of the coal pits at its disposal, I think it might so arrange its workings, as to prevent the necessity of dismissing, at one fell swoop, even temporarily, such a great number of deserving workmen. In the present instance, the suspension of labour is particularly unfortunate, as the companies which have not joined the great coalition ostentatiously keep their men at work, although they cannot work their pits so cheaply.

A series of experiments are about to be made by order of the Minister of Marine, to ascertain the different qualities of the French and English copper used in sheathing vessels. That heretofore employed in France has been found to wear away with extraordinary rapidity. The Minister has caused a quantity of English copper to be procured from London for the experiments.

The discovery of a bed of anthracite has just been made at Jurançon, in the department of the Basses-Pyrenees. In digging down to it, some curious geological facts were observed.

The weekly letter from St. Dizier, of the 29th July, gives only the current prices of articles of ironmongery, &c.—*Paris, Wednesday.*

BELGIUM.—The Government has just caused official returns to be published, which show a remarkable increase of the exportations of objects connected with mining and metallurgy during the first six months of the present year, as compared with the corresponding period of 1846 and 1845. The exportations were as follows (the first set of figures represent those of the first six months of 1847—the second, 1846—the third, 1845):—Portative arms, 1,992,981 fr.; 1,707,571 fr.; 1,446,528 fr.—coal, 869,525 tons; 651,311 tons; 735,826 tons—cast-iron, *en gueuses* and *epurée*, 56,003 tons; 33,111 tons; 19,200 tons—rails, 3489 tons; 2627 tons; 2722 tons—wrought cast-iron, 463,497 kilos.; 85,461 kilos.; 159,003 kilos.—works, in *fer battu*, 556,513 kilos.; 294,603 kilos.; 654,380 kilogrammes—nails, 3,210,871 kilos.; 2,393,359 kilos.; 3,302,600 kilos.—machines, &c., complete in iron, 804,557 kilos.; 769,260 kilos.; 696,978 kilos.—detached pieces of machines in iron and cast-iron, 360,226 kilos.; 146,524 kilos.; ——.; raw zinc, 2,690,030 kilos.; 2,178,975 kilos.; 2,524,044 kilos.—zinc *laminé*, 969,971 kilos.; 72,398 kilos.; 602,539 kilos. The principal countries to which the exportations were made were as follows:—The portative arms to the Zollverein, Netherlands, France, Turkey, United States, Brazil; the coal to France and the Netherlands, the former more especially; the cast-iron, *en gueuses*, &c., to France and the Zollverein, the greater quantity to France; the rails to the Zollverein exclusively; the wrought cast-iron to the Zollverein and Netherlands; the works, in *fer battu*, to the Zollverein and Netherlands; the nails to the Hanse Towns, Netherlands, Austria, Turkey, Brazil; the machines complete in iron to Russia, the Zollverein, the Hanse Towns, the Netherlands, France, Spain, and Austria; the detached pieces of machines in iron and cast-iron to the Zollverein and the Netherlands; the raw zinc to France; the zinc *laminé* to the Hanse Towns, the Netherlands, England, France, and United States. The increase in the exportation of the latter to England has been very remarkable. In the first six months of 1845 the export was only 4578 kilos.; same period, 1846, 146,521 kilos.; 1847, 257,301. It is worthy of observation, that the increase in Belgium exports does not arise, in any case, from the opening of new markets, but entirely from the regularly-increasing demand in the old ones.

The Belgian Government has just approved, by royal ordinance, certain modifications in the bye-laws of the new coal and zinc company of Valentine Coq, which is under the patronage, and almost a part, of the Vieille Montagne Company. The most important of these modifications are, that what is called the *siège* of the company is established at Ruy, in the commune of Hollonge-aux-Pierres, instead of at Liege; and tickets of admission to the general meetings of the company shall be given to shareholders on their making known the numbers of the shares (instead of depositing the shares) they possess at the Bank of Belgium, at the Bank of Liege, at the offices of the company, or at the offices of the Vieille Montagne at Paris, and on their presenting a receipt for the shares, and the shares themselves, at the meetings.—*Brussels, Tuesday.*

A RICH MEXICAN MINE.—The mine of La Luz, in Guanaxuato, belonging to Don Perez Galvez, is yielding the extraordinary profit of about $100,000 per week!

IMPROVED GAS WATER-METER.—As one great complaint against the use of the water-meter is, that by tilting it a larger quantity of gas can be obtained than is registered, Mr. Dickenson, of Newcastle-upon-Tyne, has patented an improvement, by which, if an attempt is made to tamper with the meter, no gas whatever will flow through it. It could not be easily described without a diagram.

AMENDMENT OF THE PATENT LAWS—No. I.

BY P. W. CAMPIN.

Considering that we plume ourselves upon being the great manufacturers and merchants of the world, it is astonishing that the patent system we still maintain, is one, not merely unequal to our peculiar wants, but, in one important point, actually at variance with them—a system, whose tendency is not to stimulate improvement, but to throw obstacles in its path, where none naturally exist. The *Mining Journal* (No. 622) gives the particulars of the costs of patents in different countries, from which it will be seen, that, whilst states, whose prosperity is little dependent on the practice of the arts, accord exclusive privileges in inventions and discoveries to their authors at a trifling cost, Great Britain, who owes all her pre-eminence to their successful practice, will only surrender them upon receiving a considerable sum. This system of high-priced patents, although it may have been very well suited to former times, as tending to repress mere scheming, is, it need not be stated, now found a serious drawback to social progress; for experience teaches us, that the majority of inventors are neither in affluent, or easy, circumstances—so that the sum must be trifling, to be to them an immaterial consideration. The British public being apt to regard any sudden and radical change as inconvenient and undesirable, the task of effecting such an important alteration in the patent laws, as a reduction of fees payable thereon would occasion, has been both dangerous and difficult—the more so, because the sums paid for patent grants are, in a great measure, not payments into the Royal Exchequer, but are the fees and emoluments of various officers, having vested interests therein. Notwithstanding this, however, Mr. Mackinnon, about the year 1837, introduced a bill in Parliament, which proposed a reduction in the patent fees of one-third; this, however, never passed into a law. It is worthy of observation, with regard to this bill, that it not only altered the amount of fees, but changed the entire law and practice with regard to patents for inventions. Since Mr. Mackinnon's bill, although the complaints against the present system have been oft repeated, there have been no attempts at amendment. The new Patent Law in France has pointed out a plan, by which patentees may be relieved from the payment of heavy sums to secure their property in new inventions, without reducing the amount of patent revenue; and if the same thing were applied to the United Kingdom, we are perfectly justified in expecting the same, if not better, results. No further interference with the present system need be occasioned to secure this desirable result than this. That, instead of paying the full amount of fees before securing the patent, the inventor be allowed the option of commuting it for an annual payment of (say) 10*l.* for England, 5*l.* for Scotland, and 10*l.* for Ireland. That these payments be made to the Royal Exchequer, which shall arrange with the various vested interests, either by annual stipend in lieu of fees, or by disbursing to them an ascertained share of these annual payments. It will be obvious to all who have experience in these matters, that the Government may safely guarantee the same amount of income from patent grants as heretofore, and eventually gain, rather than lose, by the measure; because, in the first place, the average number of patents will certainly be quadrupled—probably, increased in a much greater proportion—and, although it is to be apprehended, that many patentees will make only one annual payment, yet they will never amount to one-half the number, for, though inventors may not find their patents immediately profitable, they might be so hereafter, which will be sufficient inducement to keep up an annual payment of no very serious amount, as otherwise the patent right would be forfeited. In the second place, it will be observed, that the total amount received in 14 years on each patent, by annual payments, will be much greater than the sum now paid for the patent grant. This measure, although it will certainly remove the greatest defect in the British Patent Laws, is not all that is required to make them work smoothly; but the other amendments, not being of a fiscal character, and of inferior importance, I will reserve them for a further communication for next week's Journal.

Patent Office, 210, Strand, August 4.

FAIRBAIRN'S IMPROVED IRON BEAMS.—As so much interest has lately been excited by the failure of cast-iron girders in the construction of ridges, a patent, just taken out by Mr. Fairbairn, of Manchester, for the construction of hollow wrought-iron beams, is of considerable importance. The method adopted is to form the beam of stout plate-iron, rivetted at the joints to strong T iron, and at the angles to L iron, to give additional strength, and prevent buckling and deflection as much as possible. A transverse section represents three chambers, the two square ones at top being together rather wider than the upright one, and all bolted together in the most substantial manner. In his specification for these hollow beams, he describes them under different constructions, suitable for mills, factories, warehouses, dwelling-houses, bridges, &c.

RAILWAYS WHICH TRAVEL WITH THE CARRIAGES.—Among the various applications of mechanical science, and the numerous novelties which have been brought before the public, in consequence of the development of the railway system, was one for the construction of a wheel and apparatus of such kind, that it formed a railroad, continually laying itself down before the wheels, and being again lifted up behind. We are not aware who was actually the first promoter of this idea; but Mr. Lewis Gompertz has steadily paid attention to the subject, and has brought the apparatus for common roads to a considerable degree of perfection—it having been exhibited at the Adelaide Gallery, the Polytechnic Institution, Exeter Hall, and on the roads in London and at Brighton. There are three plans which Mr. Gompertz adopts; the first to be applied to a common coach, cart, &c., without any alteration, except a very trifling one to the wheels. It consists of eight straight bars, moveably jointed by an axis to each other, and forming a regular polygon round the wheels—the latter rolling within, while each foot of the rail comes successively to the ground; either the wheel or rails must have deep flanges, to keep the polygon on it. For a two-wheeled cart, he employs four bars, forming a square, which are united in their centres by two cross bars—the axle going through the common centre, and on which is placed the wheels, which are thus kept secure while running on the rail formed by the four rotating bars. There are several modifications in the different plans—the details of which we cannot describe without a diagram. They display considerable ingenuity; but how far they can be made available in practice, experience can alone decide.

STEAM CRANE FOR HEAVY WEIGHTS.—Mr. Johnson, of Millbank, Westminster, has patented a crane by which the steam is applied in a novel manner. It consists of a low truck on wheels, at one end of which is a powerful crane, on the usual principle—the rope, or chain, from which passes over a drum or cylinder. In the centre of the barge is a cylinder and piston, connected with a steam-boiler; and a rope from the piston-rod passes round a pulley, fixed to the axis of the drum. When a heavy weight is to be raised, the hooks are attached; steam is admitted at one end of the piston, which, rushing up the cylinder, raises the weight to a height sufficient for loading; by proper breaks, &c., ponderous bodies can be unloaded also with facility. It is well adapted for stone-works.

UNHEALTHY EMPLOY—CUTLERY GRINDERS—REMEDY.—It has long been a matter of statistical notoriety, that among all the unhealthy trades by which we are surrounded, that of knife and sword-grinder is the most mortal. In the sword manufactories of France scarcely any of the grinders reach the age of 45, the majority dying before they reach 40. Incessantly bent over a grindstone, which, if wet, saturates their clothes with showers of sandy mud and water, and which being constantly undergoing evaporation from the heat of the rooms, keeps them in an atmosphere of steam; while, if dry, they inhale the impalpable silicious powder which flies off the stone, either in the process of grinding, or in turning down the surfaces of those which have been worn unevenly; and it is a question, whether deleterious gases are not generated during the operation of rapid grinding. The effects, at all events, are, that all the men are afflicted with diseases of the larynx, bronchites, and pulmonary consumption, which is transmitted from father to son. Numerous plans have for years been suggested for improving this sad state of things, but nothing effectual had been done, until Mr. Jules Peugeot, of the firm of Peugeot, Jaby, and Co., having sincerely turned his attention to the subject. By the erection of what he terms a safety cuirass in front of each grindstone, the men are completely protected from the pieces of stone which fly off from centrifugal force, and often commit such severe injuries; but Mr. Peugeot has most effectually succeeded in dissipating the noxious fine particles of sand, and rendering the atmosphere of the room perfectly pure. This is effected by an underground drain, and connected with it a pipe from the trough of each stone. There is also a valve to shut off communication when not in use. By this means the health of the men have, since its use, been materially improved, and there appears now but little difference in their sanatory conditon from that of the men employed in other similar occupation.

THE SILVER AND GOLD MINES OF THE NEW WORLD.

SECOND PART.—ON THE FUTURE PROSPECTS OF THE MINES OF AMERICA, COMPARED WITH THOSE OF EUROPE.—NO. IV.

The high price of mercury is the great object of the miners' thoughts; and in thinking of it, he feels the mortification natural to the man, who sees his neighbour enrich himself at his expense by the simple effect of speculation; and this sentiment is strong among southern races—strong enough to passion, when that neighbour happens to be a foreigner. The Mexican remembers with bitterness the old price which yielded profits to the Crown of Spain, without being more than a third of the present price. If he employed against the other causes which render the production of silver so dear, and particularly against the barbarism of his mechanical operations—if he employed one-half of the zeal which he employs to irritate himself against the monopoly of mercury, he would soon find a compensation, and more than a compensation, for the tribute which goes to the holders of this metal. But it is not now for the first time that the thoughts of the producer of silver are concentrated on mercury. In all times it has been the great object of the Mexican miner's care. "Mexico and Peru," wrote Humboldt 40 years ago, "generally produce greater quantities of silver when they receive mercury most abundantly, and at the lowest price." The distribution of mercury, by the king's agents, among the adventurers in mines, was, at that period, the distribution of manna in the Desert. The power to distribute the annual supply of mercury, in the name of the Crown, was, of all the attributes of the viceroy, that which excited most envy abroad, and drew to him most homage at home. The Ministers of Madrid disputed this prerogative to the viceroys of Mexico, who had need to be strongly supported at Court to be able to preserve their places. One would have said that this metal possessed the power, which alchymists attributed to it, of transmuting mineral substances into silver. A report was spread that mercury existed in China, and immediately the viceroy organised an expedition to go to seek it. The mercury of China was found to be adulterated, but little abundant, and very dear, and so the expedition returned no more. That was an error. The information, which led to the belief that China could supply a great deal of mercury, has since been corroborated by more recent information. Even if Chinese mercury were impure, it would be easy to rectify. At this moment the Celestial Empire unites itself with civilized nations by much more active exchanges. England and the United States threw into it great quantities of their productions, and it only depends on other nations to do as much. Tea is no longer sufficient for returns. If, then, among the principal silver regions, there should be one whose citizens possess commercial tact, relations would undoubtedly be established between the western side of the New Continent and the Chinese ports. In this manner the miners of the New World would easily withdraw themselves from the monopoly of the holders of mercury in Europe. Third parties might undertake to do it for them; and I should not be surprised to see the Americans of the north, for example, charge themselves with the task, and reap the profit.

There would be another manner to enable the miner of Spanish America to obtain mercury at a reasonable rate—that is, to draw it from the American soil. At a period somewhat distant, remarkable indications of mercury were signalised in Mexico, in Peru, in New Granada, and even in other parts of the New World. Few countries present such numerous appearances of cinnabar (sulphuretted mercury—the state in which mercury generally presents itself in the deposits that can be worked), in beds or in veins, as the table land formed by the chain of the Andes, from the 19th to 20th degree of boreal latitude—that is, in the heart of Mexico. Investigations, made in these parts in the last century, led to the discovery of some interesting beds, which were badly examined, and from which no profit was drawn. In Peru, the indications of mercury are still more numerous; and, so far back as 1570, a fine mine was discovered and worked at Huancavelica. It yielded for a long time almost as much mercury as was required in the viceroyalty of Peru; but, towards the end of the 18th century, the stupidity of the officer, charged to superintend the working on behalf of the Crown, caused a general falling in of earth, which led to the abandonment of the mine, although the accident was by no means irreparable, and although it would have been very easy to have attacked a little further on the same vein, which is known to be of great length. From this period, the clumsy working by the Indians of the *affleurements* of the little veins, situated not far from Huancavelica, near to Sillacasa, yielded annually 140,000 kilogrammes of mercury, which appeared to Humboldt a proof of the abundance of mercury in that part of the Andes. The illustrious traveller has not hesitated to say, that "perhaps Mexico and Peru, instead of receiving this metal from Europe, may one day supply it to the Old World."

At the commencement of the century, when the mines of silver of the New World were more actively worked than at present, they required 13,500,000 kilogrammes of mercury. Those of Mexico alone absorbed 750,000. Europe supplied 1,150,000 kilogrammes, out of 1,700,000 kilogrammes which she yielded, only retaining 550,000 kilogrammes for herself. At present America, although she produces less silver, absorbs about the same quantity of mercury, owing to the extension taken by the method of amalgamating in the *patio*. Thus one or two foreign governments, separated from Mexico by the Atlantic—or, rather, two commercial houses standing in the place of the governments—hold the fate of the silver mines in their hands, have the power to enlarge or to diminish the production, and thus to exercise an influence on the abundance or the rarity of the representative sign of wealth of the whole world, or, at least, to increase the price of silver to their profit. It will readily be conceived, that the States of Spanish America feel a strong desire to relieve themselves from this dependance. To attain this object, a surer plan than all the others would be so to modify the treatment of ore as to reduce in a great proportion the quantity of mercury, which is at present required. On this point the mining industry of the New World has demanded the assistance of European science, which possesses an immense arsenal of laboratory expedients, yet to be converted into industrial processes. The century in which we live will find one of its best titles to glory in the application of human knowledge to the wants of society. Science thus turns to the welfare of present and future generations the secrets which the labour and the genius of past generations have drawn from Nature. To the demand of metallurgic industry in the New World, European science first replied by recommending an imitation of the method practised with great success at Freiberg, in Saxony. By this method the amalgamation, made in casks which turn on themselves, is effected in fewer hours than are occupied in days on the other side of the Atlantic, and with it also the consumption of mercury is very little; but this solution of the problem did not take into account the conditions under which the working of silver ore has to be carried on in the other hemisphere. It supposed the facility of procuring at a low price the articles which we are accustomed to procure in Europe at little cost, but which the Mexican or Peruvian has not at his disposal on the same terms. Thus, according to the Freiberg process, whenever ore does not contain a certain proportion of sulphuretted iron, sulphate of iron is acquired, and this substance is very common in Europe, wherever the means of conveyance are easy. It necessitates a consumption of fuel which is assuredly moderate, compared to the ordinary demand of European metallurgy; but it is excessive for Mexican or Peruvian industry, inasmuch as wood is scarce in those countries—so much so, indeed, that a forest seems likely to become a wonder, which people will travel for to see. The Saxon method for the treatment of silver ores also supposes a certain advancement in the mechanical arts, the possibility to construct and to maintain everywhere, and at little cost, certain machines, and in the population the art of employing them. But, as regards mechanics, Mexico and the whole of Spanish America are in infancy. The wheelbarrow is unknown; the cart is an object of curiosity. Except his ten fingers, his knife, and his *lazo*, the Mexican has scarcely any other tools, and does not care to have any. And, besides, to put in movement, as at Freiberg, so many casks as would be required in the working of Mexican ores, it would be necessary to have a considerable motive power at a low price.

It would be vain, therefore, for the Freiberg process to bring into use a common metal, iron, placed in disks in the casks, in order to bring upon it the corrosive action which, in the Mexican amalgamation, dissolves a great quantity of mercury, and so preserve the last-named metal, so precious in the estimation of the American miner. It would be in vain that the loss of mercury would be reduced to $\frac{1}{10}$th of the weight of the silver obtained, that is to $\frac{1}{10}$th of what is consumed in America.* This advan-

* In the Saxon process the mercury only appears to receive the silver when it shall have been separated from the substances with which it was combined. In the Mexican process this separation is itself effected by means of the mercury. The efforts that have been made to operate the same diversion on the iron in the amalgamation in the *patio*, by mixing iron with the *torta*, have been unsuccessful.

tage, which seems infinite, completely disappears when there is taken into account the fuel to be consumed,† and the greater quantity of salt required (10 or 12 per cent. of the weight of the ore, instead of from 2½ to 3 per cent.), and of the other circumstances peculiar to the metallurgy of the New World. Thus the remarkable process of the amalgamation in casks moved by a rotatory motion on themselves, which gives such great results at Freiberg, and which the Mexican miners have been so often reproached for not adopting, cannot be introduced into Mexico. It will remain banished from it so long as the general conditions of Mexican industry shall not have been profoundly modified. In the present state of things it would render silver dearer, instead of reducing the cost price. This is what is shown by the calculations of M. Duport, even in deducting the cost of the motive power and of the sulphate of iron. They show that, to economise in mercury, a value represented by less than 112 grammes of silver, there must be disbursed, in addition, a sum equal to 142 grammes for salt and fuel. Besides, the Freiberg process loses the advantage of economising mercury when the ore contains galena, or sulphuretted lead, as most of the Mexican ores do.

† The Saxon process requires a quantity of wood equal to the weight of the ore, in order to bake the ore before putting it in the cask.

[To be continued in next week's Mining Journal.]

POSTAL STEAM NAVIGATION IN FRANCE.—The progress which steam navigation has made in this country, particularly in the transmission of the mails, and the benefits it has conferred on all classes of the population, has at length aroused a spirit of enterprise in the French administration. Always opposed to individual enterprise, and the Government in all large national works monopolising the undertakings, for the sake of patronage, and feeding hungry *employés*, they will not, doubtless, on the occasion we are about to notice, step far out of their usual course, however nationally injurious they may know it to be. After long demur and delay, the Ministers have consented to the construction of six iron steam-ships, of 1800 tons burden, and 450-horse power each. The iron with which these are to be built is, we understand, to be obtained from England; but whether free, or under what regulations, we have not heard. They will be built on a similar plan to our Royal West India and North American packets, and classed as frigates. The following post-office notice having appeared—issued at St. Martin's-le-Grand—confirms the truth of this statement:—"The French Government having established a line of mail steam-packets, to run between Havre and New York, all letters and newspapers intended to be forwarded from the United Kingdom to America by these vessels, must be specially addressed, 'By French packet from Havre.'" The postage on letters will be according to weight, and newspapers charged 2d. each, which must be paid in advance. They are appointed to leave Havre on the 15th and last day of every month, until further notice. Letters and newspapers to be forwarded by these packets will be sent in the regular French mail to Calais, unless specially directed "*via* Southampton." This is a step in the right direction, and we hope to see it followed up by other measures of improvement and reform.

AN UNFORTUNATE PATENTEE.—Francis Higginson, patentee of the iron girders, joints, &c., used for the prevention of fire in the construction of houses, has been compelled to seek relief from his creditors through the Insolvent Debtor's Court. Mr. Higginson, in the course of a lengthened examination, asserted, that he had paid 3500*l.* at various times to Mr. Cubitt, the builder, on account of some houses building in New Oxford-street—while Mr. Cubitt, on his oath, denied ever receiving one farthing!

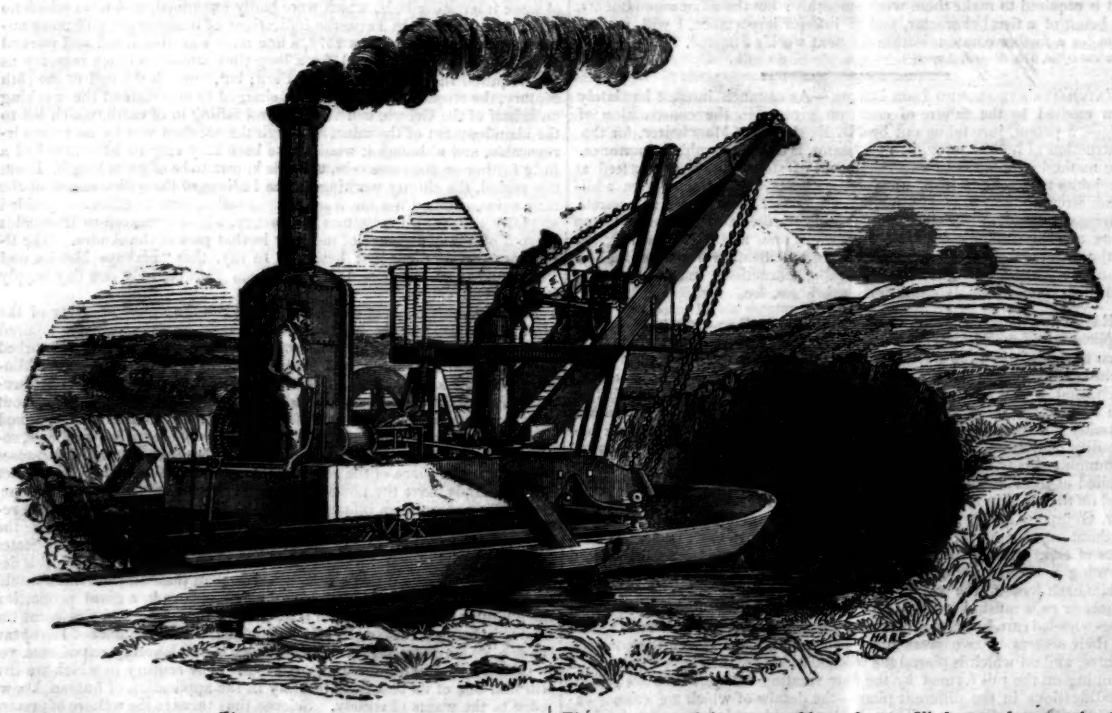
ARSENIC IN MINERAL WATERS.—Arsenic has been found, by M. Valchner, in various mineral waters at Viesbade, in Germany, and this has been confirmed by M. Figuir. The last mentioned chemist has ascertained that the arsenic is in the state of arseneous acid, and that the proportion is nearly 0·045 grammes for 100 litres of the water. He detected no arsenic in the waters of Passy.

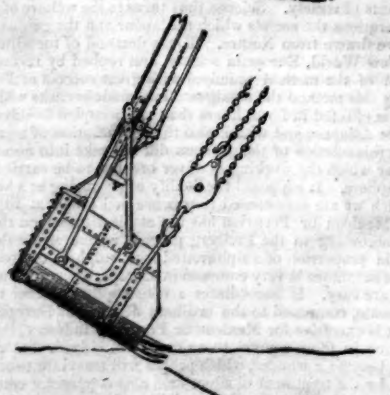
SULPHURIC ACID—ITS MANUFACTURE, PROPERTIES, AND USES.

Mr. Henry M. Noad, delivered a lecture on this subject, at the Royal College of Chemistry, in which, after alluding to the great importance of chemistry and its bearings, on almost every branch of social industry, he observed that it may even be classed among the principal elements of civilization; in illustration of which, he adverted to the influence exerted by sulphuric acid on the manufacture of soap—an article, the consumption of which is not subject to the caprices of taste or fashion, but absolutely essential to cleanliness and comfort. From the year 1829 to 1834 the average importation of barilla into this country amounted to 12,600 tons. Now, however, this ash is scarcely to be met with in the market: nearly the whole of the soda consumed in this country in the manufacture of soap and for other purposes being obtained from common salt through the agency of sulphuric acid; and the united quantity of soda ash and soda crystals annually manufactured is calculated to exceed seven times the largest importation of barilla ever made in one year. This increased consumption of soda is due to the repeal of the salt duty, and to the improvements that have been effected in the manufacture of sulphuric acid. The lecturer proceeded to review the sources and properties of sulphur; and, after showing how extensively this elementary substance is diffused throughout the globe and in all the kingdom of nature, he remarked on the imprudent policy of Sicily, in granting to a French company, in 1838, a monopoly for the purchase and sale of sulphur—a course which, had it been persevered in, would, probably, ere this have entirely, or to a great extent, deprived Sicily of her lucrative article of commerce. During the time the monopoly lasted (only two years) no less than 15 different patents were taken out for methods of obtaining back the sulphuric acid used in the manufacture of soda. Hundreds of thousands of pounds weight of sulphuric acid were prepared from pyrites; and a process was indicated for decomposing gypsum. Even at the present time large quantities of sulphuric acid continue to be made from pyrites; and in 1842 the importation of sulphur from Sicily was not one-third of the amount imported in 1836. Mr. Noad described the various compounds of sulphur with oxygen; illustrating experimentally the properties of sulphuric acid. He gave a detailed account of the present method of preparing sulphuric acid on the large scale; imitating it on the lecture table by causing two streams of sulphurous acid and nitric oxide gases to come into contact, together with steam and common air, into a large glass globe; and he explained the theoretical nature of the reactions which took place by means of diagrams. The leaden chambers employed in some manufactories were stated to be of immense size—upwards of 180 ft. long, having a capacity of 35,000 cubic ft., and being capable of preparing 10 tons of acid weekly. The great saving effected by the modern improvement of substituting vessels of platinum for those of glass for the final concentration of the acid, notwithstanding the enormous price of the former, is manifested by the fall in the price of sulphuric acid from 4d. to 1½d. per pound. The lecturer performed a series of experiments in illustration of the valuable properties of sulphuric acid. He adverted to its great use as an elegant and economical means of refining silver—and to its introduction into agriculture as a solvent for bones, by which phosphate of lime is not only brought into a liquid state—and thus more intimately diffused through the soil—but a portion of phosphoric acid is likewise set free to combine with lime or other basic matters in the soil. The lecture was concluded by observations as to the manner in which the sulphates act as manures—viz., by furnishing the necessary supply of sulphur to those parts of plants in which this element is found—and of which it appears to be an essential constituent—viz. the gluten and albumen of the several varieties of grain, and the legumin of those plants which are called *leguminous*.

THE ARDSLEY OAKS COLLIERY.—A friend of ours, who has recently gone over this colliery, in company with its active and intelligent steward, Mr. G. Armitage, states that it is now perfectly ventilated, that the current of air through its various passages is so exceedingly strong as to make it difficult to carry a lighted candle therein, and that the lamps used in the south levels are regularly locked. This intelligence is very satisfactory.—*Sheffield Iris.*

THE STEAM EXCAVATING MACHINE.





In the *Mining Journal* of last week, we gave insertion to a communication from Mr. J. BURROWS HYDE, a proprietor of the American Steam Excavator; and we now proceed to fulfil the promise there given, of laying before our readers some further particulars, with a diagram. On the 24th of June, 1843, we gave a descriptive account of this machine and its performances, from actual inspection, while operating on the Eastern Counties Railway, near Brentwood, with a perspective diagram of the original machine; the present cut is of a machine of similar construction, applied to dredging. In the operation above referred to, the bank was about 14 ft. high, and composed of a stiff marly clay. The engine was set to work, and the scoop, which is 4 ft. wide by 3 ft. in length, and 3 ft. 6 in. in depth, was forced with the greatest facility through it, taking up a slope of earth until full, thus raising about two cubic yards, progressing regularly, and working alternately, on each side and in front of the beam, until it had cleared a base of 30 ft. wide by 10 ft. advance for the whole height. The scoop containing two cubic yards was filled at each sweep in 40 seconds, without jerk or vibration. The power on the chain employed in raising it through the soil was about equal to that of 40 horses. Besides this, there is a horizontal motion given to it, by the application of gearing, working on a horse-shoe shaped rack in the original machine, and by a toothed wheel in the present one, by which the scoop can be swung round a semicircle of 15 ft. radius over the receptacle for the earth, when, by a rod in reach of the attendant, a bolt is withdrawn, and the bottom opens, to allow the earth to fall out. The engine employed is calculated as 8-horse power, with 9-in. cylinder, 12-in. stroke—the number of strokes averaging from 90 to 110 per minute; it weighs about 16 tons, is 30 ft. in length, including crane, with 6 ft. between the wheels, and the cost of construction, including gearing and appliances complete, is about 1000*l.* From these few remarks, it will be observed, that the operation of the machine consists of three movements—the progressing motion (being locomotive), the digging motion, and the horizontal curve, or turn-about, motion—and notwithstanding these actions combined closely imitate the digging action of the hand and arm, and the advance of the human frame, there is nothing like complexity in the entire arrangement; but, in two or three days, any workman may be thoroughly instructed in all its motions, and safely intrusted with its management. On the Western Railway, in Massachusetts, it excavated 19,000 cubic yards in 25 days; and it has completed 1000 yards a day for days together. Engineers estimate a man's work, picking and loading stiff clay, to be six cubic yards per day; thus, allowing only 900 yards a day, quite 150 men would be required to do the work of this machine, which, allowing for interest on the cost, wear and tear, men's wages, fuel and oil, the expenses per day may be considered about 3*l.*—showing a saving of 130 men. The above engraving is a representation of the machine with all its improvements, as applied to dredging; the principle is precisely the same as the land excavator—a great desideratum to a contractor, as its utility is thereby much enhanced.

They are fitted up in a strong barge, and can be propelled by a screw turned by the engine; the crane is placed at one end of the boat, and the boiler, cylinder, and drums, in the centre; the scraper in the cut is furnished with a longer arm than that used in the land machine; and instead of chains, tooth gearing and racks are sometimes used to drive the scraper, as also a large bevel wheel, to turn the crane round. All the reports from those engineers who have had the machine in operation, bear testimony to the regular and powerful capabilities of this prince of *navigators*, and to its economy; and there is certainly much to be wondered at that it has not come into extensive operation in this country.

Original Correspondence.

BRITISH INVESTMENT OF CAPITAL IN FOREIGN MINES.

SIR,—When we consider the enormous amount of British capital which has been swallowed up in the prosecution of foreign mining enterprise, without an adequate return—more particularly in the search after the precious metals in South America—the capitalist, who is desirous of entering into such speculations, should pause ere he commits himself to any new scheme, however plausible it may appear in a prospectus, or under whatever patronage it may be brought before the public. Your Paris correspondent, in the *Mining Journal* of Saturday last, fully exposes one of the most bare-faced tricks that was ever attempted to be played off on gullible adventurers; and, as I have had some hints of what he there states, that "efforts are, I know, making, and are to be repeated with still greater energy, to induce English capitalists to dabble in the mining speculations of Algeria," I would caution my countrymen to avoid the snare which is being spread for them, tinselled out in all the glaring colours of the rainbow, but leading to loss and ruin. Notwithstanding all that has been said of the mineral wealth of the new French province, it is an undisputed fact, that nothing has yet been discovered with the slightest possibility of making any return for many years to come; and the great probability is, that Algeria will never become a profitable mining district. It is true there are immense deposits of iron in various parts of the country, but being unassociated with the coal measures, they are comparatively valueless; for, although there are, in some places, considerable forests, nobody is foolish enough to consider that they will last for ever—and I have no doubt, that should charcoal and iron-works be established to anything like the extent which France now requires, to render her independent of other countries for her iron, a very few years will see the extinction of available African fuel, and the capital advanced be in consequence lost, or most wofully depreciated. Another most weighty objection, and one which has been very grievously felt by Englishmen in Mexico, and South America particularly, is the want of control over their own property and funds. In investing capital in Algerian mines, the Englishman is entirely at the mercy of French speculators, who are always but too ready to finger the superfluous cash of John Bull, and to exercise what they consider a fair retaliation on "*perfide Albion.*" There is in our country, even in the counties of Devon and Cornwall, a vast extent of unemployed mineral ground, which offers advantages far greater than anything which Algeria can boast, even were she in an equally advantageous position, and if it was perfectly certain that she would always remain a colony of France, which is by no means the case; and I, therefore, respectfully say to all who are that way inclined, "look before you leap." MENTOR.

Leadenhall-street, August 4.

THE DIAMOND.

SIR,—In reference to a paragraph in your penultimate Number, I may be permitted to observe, that I have seen the diamond in some of my experiments, with the oxy-hydrogen blow-pipe, dark and carbonaceous; diamond powder, before the jet was dispersed in scintillations, of intense brilliancy. With this instrument, the diamond speedily forgoes its brilliancy, and becomes opaque; and, on one occasion, the diamond was in a state of FUSION—an experiment since successfully repeated by Prof. Silliman. In my experiments with this powerful instrument on some of the gems, I succeeded in fusing two emeralds into one, which was entirely dispossessed of colour.—J. MURRAY: *Portland-place, Hull, Aug. 3.*

GUN-COTTON.

RESPECTED FRIEND.—The terrific accident resulting from the use of gun-cotton may lead to the question, whether any individual has a right to manufacture so treacherous a compound? It seems, that it would be better to abandon its use altogether, unless means can be discovered for diminishing the danger. Possibly, if the cotton was immersed in a weak solution of sulphate of alumina, after being rinsed from the acid, it would not be so liable to spontaneous combustion, as the fibres would be surrounded by a small portion of that salt. The question is, whether the sulphate of alumina would adhere to the fibres, or whether the explosive power of the cotton would be materially diminished?—and as I have no time to make experiments, I merely give the suggestion to those chemists who can give their attention to the subject. If there is no remedy in this, or some other form, the sooner all the gun-cotton is exploded the better.

Liverpool, 7 mo. 27. JOHN DE LA HAYE.

WATER-RAMS ON THE RIVER THAMES.

SIR,—I have visited lately several of the locks on the River Thames. I think that the *water-ram* could be very extensively used, with much advantage, for the supply of houses, for agricultural, and for many other purposes, not now necessary to suggest. I understand that, on an average, there is from 4 to 6 ft. fall of water. Make, then, *monster* water-rams, and direct the stream of the Thames through them; the quantity of water elevated would be enormous. When a boy, I made a water-ram in a rough way, but it answered well. It was put up in our garden, in Wiltshire, at a village near Bath, where we had the fall of a large stream of water. I soon found out, that to make the ram correctly work, it was absolutely necessary that the height of the column of water should be constantly the same, and that the valve must be loaded according to the height of the column. Now, a steady height of water at the Thames locks could easily be maintained (and the valves, therefore, properly adjusted once and for ever), in spite of floods, &c. The machine would be constantly working night and day, requiring neither coals, steam-engines, nor talented engineers; and would mount up a very large body of water with little expense, and, moreover, be no impediment to navigation. The works could be constructed at the side of the locks. J. M——s.

Battersea, August 5.

P.S. I may mention, that, probably, no engineers have paid more attention to the principles of the hydraulic ram than Messrs. Easton and Amos, Southwark.

COMMUNICATION BETWEEN GUARD AND ENGINE-DRIVER.

SIR,—In last Saturday's Journal I observe a suggestion by Mr. Maddison, of a method of communicating between the guard and engine-driver of a railway train, by means of a fan blast. This method, I fear, would not be found sufficiently powerful, so to compress the air as to give out a whistle loud enough to be heard above the rattle of a train travelling at full speed. It should be borne in mind, that the steam from the locomotive acts upon the whistle with a pressure of at least 50 lbs. upon the square inch; whilst I very much doubt whether, by a fan blast, a pressure could be obtained exceeding half that number of ounces. Yet is the case not hopeless; and the desirableness of it being generally admitted, I take the liberty of suggesting another plan, which I think would be practicable, and, at the same time, exceedingly simple.

Let there be an eccentric wheel fixed upon the axle of the carriage on which the guard rides, to which should be attached a vertical rod, extending to or through the roof of the carriage, which, by the motion of the eccentric, would work a condensing syringe; the condensing syringe should have a receiver attached to it, with a valve opening inwards, like those with which air guns are provided, and of sufficient capacity to contain condensed air required for half a dozen signals—the air in a proper receiver might be compressed to any desirable density, and thereby be made to act upon a whistle more loud and shrill than even the steam whistle itself. The syringe might be provided with a safety-valve, loaded to the point at which it was thought desirable to compress the air in the receiver, which, when the air escaped thereby, would serve as a signal to the guard to throw the condensing syringe out of gear. After one or two signals had been given, the syringe should again be put in gear, until the receiver was fully charged. I am not sure whether a condensing syringe alone, without a receiver, might not be constructed to answer the purpose. Let there be two whistles placed on the top of a proper-sized condensing syringe, one acting by the rushing in of the air to the syringe when the piston was drawn out, and the other by the compression of the air when the piston was pushed in to the syringe. In that case, the syringe should be provided with a tap, to allow free ingress and egress of the air to the syringe when open, without acting upon the whistles—all of which air, when the tap was closed, would pass through the whistles, and give two distinct sounds for every revolution of the carriage wheel.—B. B.: *London, August 2.*

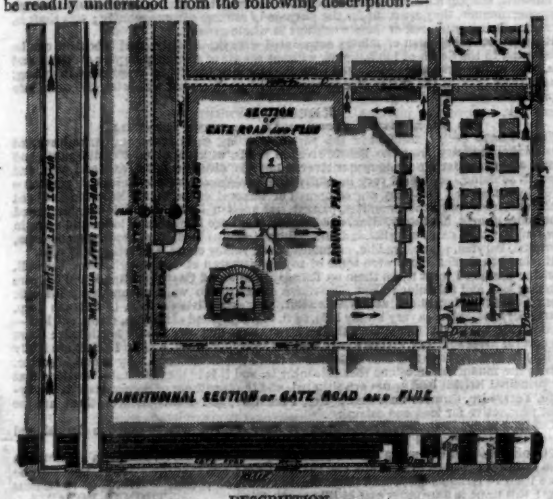
Mr. GIBBONS'S SYSTEM.

Sir,—In an undue anxiety to quarrel with Mr. Gibbons's enlightened system of working and ventilating the coal field, your correspondent overacts his part—the evidence on the trial of Love clearly and decisively establishes the superior merits of the plan propounded by Mr. Gibbons. On that trial not a whisper was mooted against the excellence of the plan and working of the Yew-Tree Colliery. The learned Judge, on the occasion, expressed himself perfectly satisfied, from the evidence adduced, that the system of ventilation, &c., was unexceptionable and perfect. Viewed with an unprejudiced judgment and unjaundiced eye, the accident of explosion did not detract an iota from the superior merits of Mr. Gibbons's system. I must candidly confess, Mr. Editor, that your correspondent appears to me very much in the attitude of Don Quixote encountering the windmill.—J. Murray: *Portland-place, Hull, August* 3.

PROPOSED METHOD OF CLEARING OLD WORKINGS OF THE CARBURETTED HYDROGEN IN THE THICK-COAL MINES OF STAFFORDSHIRE.

Sir,—The annexed diagram is transferred from a plan intended to be laid before Government, for their inspection, respecting the clearage from old workings of carburetted hydrogen, in the thick-coal mines. The various plans which have been proposed to attain this object, have either been on principles too complicated or too expensive for general introduction.

The present system of "damming up the gas" in the old workings, is certainly very objectionable, and for these reasons—first, because the old workings form large reservoirs, accumulating the explosive compound, from which, when full, the surplus is forced into the new workings, thereby rendering them highly dangerous to the workmen;—also, in case of ignition in the new workings, the fire often penetrates the old workings, thus proving doubly destructive (if I may so term it) to the workmen. But if measures can be devised to obviate this great evil—although such measures, perhaps, may be attended with a trifling expense—those means ought not to be witheld, but should be strictly enforced, and extended to all mines generating this explosive compound. In the annexed plan it is proposed to have flues in the up and downcast shafts, which are carried under the gate roads, in the form of culverts, to the extent of the old workings, by which means there will be at the disposal of the miner an independent current of atmosphere, for the purpose of clearing the old workings, or those parts nearest to the new. The old workings may be entirely swept of the gas they contain, instead of forming vast and dangerous reservoirs, as at present; which also would, in a short period, greatly tend to exhaust the mines of this explosive compound. The engraving will be readily understood from the following description:—



DESCRIPTION.

A—Ingress of the air from the down cast flue into the old workings.
B—Egress of air, after clearing old workings, into the upcast flue, under the gate road.
C C—Dotted lines, showing the flue, or culvert, under the gate roads.
D—Old workings, which could be also cleared by the same current of air from A.
E E—Branch culverts, from up and down cast shafts, to A and B; by which means the course of the air could be turned with a valve—shown at F—as may be required for the different parts of the work.
G—Section and dimensions of the flue culvert.
H—A funnel carried up, as shown in the longitudinal section in the old workings, for the purpose of top ventilation.
I and J—Sections of culvert flue under the gate road.

This plan is not in any way intended to interfere with the present system of extracting the coal, but with a view of clearing, or disinfecting, the old workings of the deadly intruder.

A great many objections, no doubt, will be raised against this system of clearing the old works, as to the expense of making the flues, or culverts; but one direct advantage it possesses over the old system, is, that the gate roads in the opening of the works may be driven without separate headings, which are unavoidable at present, for the purpose of ventilation. If the costs of the separate headings are balanced with the costs of the flue and culvert, the extra expense will be found a trifling sum, as the expense of brickmaking in collieries seldom costing more than 15s. per 1000.

The upcast flue could be connected with the engine-chimney, in order to secure a permanent curent of air through the old workings. And it will be readily understood, that the current of air in the flues and culverts are no way connected, but altogether independent of the moving column of air in the up and downcast shafts.—G. Shepherd, C.E.

London, August 2.

THE BOW-STRING BRIDGES—MOTLEY v. STEPHENSON.

Respected Friend,—When I stated that the iron-bridge, invented by T. Motley, was destined for another age, I was not aware that the bridge across the Tyne was constructed on the *bow-string* principle, as R. Stephenson is generally considered the inventor. In fact, it does not appear that the Stephensons' have ever mentioned the name of T. Motley in connection with that bridge—although, it appears, that he has been occupied during 20 years in bringing it before the public! Was it not on this bridge that some railway directors proposed, long ago, to place the statue of G. Stephenson? *Ah! c'est excellent!*—Brutus is an honourable man.—John De La Haye: *Liverpool, 7th mo.*, 1847.

ON THE CONNECTION of ENGLAND with FRANCE by RAILWAY.

Respected Friend,—After my plan for joining England and France by railway has been above three years before the public, one objector to the plan has come to light in the person of "Q.," who desires to be informed, how I intend to provide for the ventilation of the tunnel; or, if I intend that the passengers should hold their breath until they arrive at the other end. If "Q." was really a *constant reader* of the *Mining Journal* he would have seen that I have proposed various modes of ventilating the tunnel without difficulty; and, were he a *scientific man*, he would have proposed a mode of ventilating the tunnel without driving the trains at a lightning speed; or, if he has perused the papers which have been published on the subject, he must have been holding his breath during the time, and thus fancied himself in a tunnel 20 miles long, which had not been ventilated for a twelvemonth. I suppose "Q." is one of those who seem to imagine their total ignorance of a subject a sufficient qualification for pronouncing an opinion upon it. Various modes of ventilating tunnels have been already laid before the public; but, as many new subscribers of the *Mining Journal* may not be aware that this apparent difficulty can be easily surmounted, I will briefly sum up the whole as shortly as possible.

In the first papers, which were written on the subject, I proposed to lay a large cast-iron pipe the whole length of the tunnel, this pipe being bored in the centre, and having branch pipes extending to the roof, an engine of 100-horse power would be placed at each end, and would work the air-pumps, both day and night, to exhaust the impure air—so that there would be a continual rush of fresh air from outside. Of course, no locomotive would enter the tunnel. I am aware that, if a vacuum is obtained with a pressure of 10 lbs. per square inch, a less amount of pressure will be obtained at the other end of a pipe 10 miles in length; but even if half the power was lost in transmitting it at such a distance, the atmospheric system would be still more economical than the locomotive. Another mode of ventilating tunnels would be by means of compressed air—this could be done with a smaller pipe; the pure air rushing in the centre of the tunnel would drive the impure air at each end. One of the members of the Liverpool Polytechnic Society, a chemist, stated that, in his opinion, the tunnel could be sufficiently ventilated by means of fanners, similar to those used in foundries for fusing metals, and that it would be found that very little power would be required to give sufficient fresh air. Another plan which was suggested was, to line the inside of the tunnel with wood, and then to exhaust the air from its whole length for propelling the trains—the piston being simply a frame of wood, covered with a flexible substance, extending beyond the edge, in order to make it nearly air-tight, the whole being fastened to the front carriage. A powerful engine at each end would soon exhaust sufficient air to give a pressure of 1 lb. per square inch, which would be sufficient to propel the heaviest train with great velocity: one of the engines would continue to work after the starting of the train—by this plan the air would be frequently renewed, and it would be more economical than any other plan; for it is well known, that less power is required to form a partial vacuum in a large receiver, than a perfect vacuum in a small one, the air in the latter case pressing against the piston—so that a great deal of power is lost in overcoming that pressure. I believe that the scientific world will be satisfied that *there is no limit to the quantity of air which can be supplied to the tunnel.*

But, now, as to the effects of the waves on the structure. If we imagine a solid beam of cast or of wrought-iron, 16 ft. square, to be placed on the bed of the water in sections of 1000 ft. in length, the whole extending from shore to shore, no one would suppose that the waves would injure it; for the tunnel would be simply a hollow beam of iron, but constructed in such a form, and strengthened, so as to be nearly as strong as if it were a solid mass of metal—so that, even if the effect of the waves was felt on the bed of the channel—which is not the case, except near the shore—the tunnel would not be injured; vessels loaded with stones might sink on it, or anchors might be dragged over it, and it would still remain during ages in its original state. Of course, the chances of such accidents, happening exactly on the tunnel, must be very distant. The effects of the waves on stationary bodies is a subject which has been but little investigated; but, from what I have observed myself, I am led to conclude that the idea of the terrific effect of the waves is a bugbear of the imagination. When a vessel is wrecked on a dangerous coast, it is thrown with violence against the rocks; but the waves are merely the medium which throw the floating body against a stationary body—*the water itself has very little effect on a stationary mass.*

In my native island (Guernsey)—a mere rock cradled in the Atlantic—I have had occasion, during many years, of observing the effects of the waves on the coast. Nothing can be more magnificent, than a storm viewed from the cliffs—the waves curling to such an height, that one might suppose the houses along the shore would be swept away; yet when the tide has receded, there is nothing but the pebbles and gravel to indicate that the sea has ever invaded that spot. About one quarter of a mile from the harbour, on the road to Lancresse, opposite Paris-street, is an old house, built between the sea and the road; and at high tide, there is at least 10 ft. of water against the wall of the house, which is perpendicular, and built of common granite and mortar. When I visited this house, in 1836, the proprietor, a widow, informed me, that she preferred this residence to any other, although she had several other houses in the town; the scenery from this spot was so magnificent, that she could not persuade herself to leave it. On expressing my surprise that no water entered during a storm, the old lady quietly said, that *she kept the back window shut*, for the waves were in the habit of climbing above the roof, and paying an unwelcome visit to the pedestrians in the street on the other side. I afterwards watched this house, during a gale, from a distance: the waves succeeded one another with frightful rapidity, dashing against the house in a huge black mass, and curling above in pure white foam. I thought it must be very essential to have *the windows shut*, for there were several large windows towards the sea; but the mystery was, how that could be a sufficient protection, for I could see no shutters of any kind; yet, on revisiting the house, I found that there was not a pane of glass broken, or cracked, although it was the ordinary window glass. Yet this was not on the border of a river, or narrow channel, for there is nothing to oppose the progress of the waves, the island being isolated from any other land for many miles. On the western side of the island, about three miles from the town, and a short distance beyond *La Haye du Puits*, the Atlantic itself is seen in all its glory. There is no land between that spot and the New World; yet along the shore, at low tide, there are rocks, which may be seen with fissures so deep, that a slight blow of a hammer will shatter a part to pieces, although they must have been in that state during many years—the waves having no power on the rugged surface, although one would suppose they would be dashed to pieces in the next storm.

When anything is projected, which involves a new principle, and a gigantic work, the human mind, in contemplating it, gropes as in the dark—it asks for some precedents, in the shape of works already executed, which bear a considerable resemblance to it in principle; and, in the absence of these, it frequently arrives at the conclusion, that the object aimed at is not attainable—thus it is, that the pioneer of every new system has met with opposition. When T. Gray advocated the adoption of the railway system, the mass of persons were against him: railways had never been used for the purposes which he proposed—consequently, they were pronounced as useless; the originality of the plan was its defect. The same was said of the project for establishing a steam communication with America; the mode proposed appeared plausible enough, but no one had ever heard of such a thing being accomplished before—consequently, it must be altogether a visionary idea. When T. Brindley proposed to carry the Grand Junction Canal across a river, by means of arches, an eminent engineer, who was consulted by the Duke of Bridgewater, replied, that he had often heard of building castles in the air, but it was the first time he had seen the place where one was proposed to be built; he, probably, brought a long list of obstacles which would have to be surmounted, all of which seemed very plausible to most persons at first thought, but particularly to such men as "Q.," who were, probably, very numerous in the middle of last century, as well as in the middle ages; but Brindley, while he did not dispute the difficulty of carrying out the project, immediately set about the work, although the "Q.'s" would have had a much higher opinion of his reflective powers, if he had abandoned it: his business, however, was not to look in despair on the gigantic task, but to discover means of surmounting the obstacles in his way, and the eminent engineers saw to their amazement the fabric erected within 10 months, and which exists to this day, as firmly as when first constructed. Of course, if the eminent engineers had been sufficiently influential, they would have been the greatest obstacle in the way of Brindley, and to this day they are the same as their cousins of the last century; and their auxiliaries, the "Q.'s," may possibly be still very numerous. "Q." says that all men are like himself—but that is not true, for nearly every individual I have met is the reverse. It is true that "G. S." is also against this plan; but, then, he is an eminent engineer, and it is well known that he has some very interested motives for attacking my invention, quite apart from scientific grounds. But, if precedents were sufficient to prove the practicability of joining Dover and Calais by railway, it would be easy to point to works which must have been more difficult to carry out; but some persons will say that a more difficult work is not a similar work—very true; but if we can bore a tunnel three miles in length in solid rock, we shall be able to bore the same length in clay. Now, the question is, whether we can bore a tunnel through water?—why, we might as well dispute the possibility of boring a tunnel through the atmosphere. If "Q." will take a trip to Cherbourg, he will see a breakwater stretching three miles in the sea, in the form of a crescent, in 60 ft. of water; he will confess that the "Q.'s" have not built it, for the work had no precedent; but he will confess it is possible to construct any number of a similar kind, provided they are not half a mile longer, and are constructed with materials exactly similar; it would be offering an insult to the intelligence of the "Q.'s" to suppose that they would not make such a confession.

Now, supposing the breakwater to have been constructed at Calais, instead of Cherbourg—I wish to explain this familiarly, for the especial benefit of the "Q.'s"—and another one, similar, constructed parallel to the first, then an iron tube floated between, and sunk below, and the whole covered with loose stones, &c., we have then three miles of sub-marine railway completed. Now, I suppose it would be as easy to construct a similar structure on the Dover side of the Channel, unless "Q." imagines that a work, which has proved a trifle for our neighbours, would terrify John Bull? and "Q.," a genuine Englishman of the old school, would scout such an insinuation with patriotic indignation. Thus, according to precedents, we have six miles of sub-marine railway completed without difficulty; but the stock of precedents is exhausted before half of the project is carried out. But as the remaining part of the work will be in deep water, where the waves have no more effect than on the Alps, I may reserve the description of that part of the work for another communication, in which the whole will be explained at length, detailing an easy mode of carrying out the project—although I am aware that the want of precedent for this part of the work, may have considerable effect on the "Q.'s." But I have already stated, that I would dispense with breakwaters—in fact, by the new plan, this structure will be infinitely stronger without. I have ransacked the Cherbourg work merely for the sake of precedents; and to prove what *can* be done, even without doing much more than has been already accomplished—in fact, thus far, I have not met any individual who had examined the plan, who objected to it on the grounds of impracticability: a celebrated author once remarked to me, that the term, "impracticability," might be almost banished from the engineer's vocabulary. No engineer, however "eminent" he may be, would doubt the practicability of boring a tunnel under the English Channel; and I believe that contractors would engage to construct a breakwater from shore to shore. The question would not be as regards the *practicability* of the thing, but simply as to the *economy*—that is, whether the amount expended would be repaid by the traffic on the railway. Now, the plan which I propose is not complicated—while I believe that every scientific man who will examine it, will confess that it is both safe and economical. I have not been surprised that the talented correspondents of the *Mining Journal* have not brought forward the arguments of "Q.," but I had expected the "Q.'s" to come out long ago.—John De La Haye: *Liverpool, 7mo. 27.*

The First Railways and their Opponents.—When Jacquard, the inventor of the wonderful loom that bears his name, was arrested and carried to Paris, with his machine, Carnot, in the presence of Napoleon, roughly said to him, "Are you the man that pretends to do that impossibility—to tie a knot in a stretched string?" His compatriots of Lyons, the impossibility being surmounted, broke his machines in 1806, and raised a statue to his memory in 1840. All those who are in advance of public opinion must bear ridicule or persecution. In 1825, the *Quarterly Review* thus ridiculed the notion of certain engineers—Telford amongst the number—that a railway engine could go 18 or 20 miles an hour: "The gross exaggerations of the powers of the locomotive steam-engine, or, to speak English, the steam carriage, may delude for a time, but must end in the mortification of those concerned. * * * We should as soon expect the people of Woolwich to suffer themselves to be fired off upon one of Congreve's ricochet rockets, as trust themselves to the mercy of such a machine, going at such a rate." In that year, the common belief was, that railways were altogether delusions and impositions. The Liverpool and Manchester Railway was opposed in Parliament with every form of invective. One Member, in 1825, declared his opinion "that a railway could not enter into successful competition with a canal. Even with the best locomotive engine, the average rate would be but 3½ miles per hour, which was slower than the canal conveyance." (*Hansard*, 2d series, vol. iv. p. 853.) Another assertion, which Mr. Huskisson was obliged to meet doubtfully and apologetically, was, "that there were two or three canals which were sufficient for every purpose of commerce in the districts through which the railway was to pass." Let us be just to what we have been accustomed to decry as the dark ages. Let us be tolerant to those who imprisoned Galileo, and rewarded Columbus with chains. If there be a reality in any discovery—a true thing, and not a sham—if there be strength, or utility, or beauty, in any work of mind—it will live and fructify, whatever critics, or orators, or inquisitors, or even kings, may do to crush it. And so it is with railways. On the 15th September, 1830, the first passenger line, the Liverpool and Manchester Railway, was opened. The conveyance of passengers appears originally to have been an inferior consideration to the conveyance of goods; and the directors modestly anticipated that one-half of the passengers travelling by coaches between the two towns might venture on the railway. In the first year after the opening there were conveyed 445,000 passengers; in the year ending 1st July, 1845, the passengers so conveyed amounted to 897,000. On the 24th April, 1847, there has been a total expended on the railways of the United Kingdom, of 78,600,000*l.* sterling; and in the last week the aggregate receipts upon these railways was 160,000*l.* being a total exceeding 8,000,000*l.* per annum, for the conveyance of passengers and goods.—*The Land we Live in.*

Charges against Railways.—Parties desirous of constructing railways, encouraged by the unprecedented success which has attended some of those undertakings, come to Parliament for leave to do so. They are told that they monopolise the capital of the country, and that they are not to build them. An indistinct notion prevails that railways absorb capital. People have not yet gone the length of openly declaring that they caused the present dearth of corn, or the momentary stoppage of the factories; but there is a notion abroad all to not right about them. It is true that we have no line so long as some of the German lines; but what does that signify? What good can it do an Edinburgh man to be 24 hours sooner in London than he now is? People shake their heads, and Parliament throws out the bills. Matter-of-fact observers make such comments as the following:—A railway requires about 200 tons of iron per mile. Is Parliament afraid of exhausting our mines? To produce this iron, wages are paid long before the railway company gets its rails or chairs. The labourers, therefore, run no risk. The timber is imported; its cost and its freight are paid before the railway company gets it. The landowner is on the spot to look after his own interests. Who runs any risk in contracting with a railway company? Well, but these companies lock up all our money. How do they lock it up? They neither make rails nor sleepers of it. If money passes through their hands, it goes forthwith into the pockets of the ironmaster and the timber merchant, or rather of the people whom these employ. They will scarcely deliver their goods without payment, and, consequently, the money subscribed can scarcely be locked up, at least not by the company. To people of such simple minds the money employed to enable a company to order some thousands of tons of iron, and some hundreds of thousands of cubic feet of timber, instead of being consumed, is positively increased by its being thus appropriated. Let the railway but be built, and it will be seen whether the company is a loser in money or not. And if the shareholders have lost no money, how can the nation be a loser? Where is even a pretext for interfering in this purely commercial calculation? If this simple view of the matter be not the right one, it would be charitable in any opponent of railway speculations to set us right. He, of course, can lay his finger on the particular party who suffers by the expenditure necessary to construct a railway, and can show which of the monsters that beset the path of the monied man, swallows his cash without giving it to any one else. The obnoxious party, when once detected, may run the gauntlet between landowners desirous of sending produce cheaply to market, and of manufacturers in want of cheap coals or of raw materials. We might add the population of remote districts, desirous of being cheaply fed, to the list of his foes. But until we see him, how can we decide whether he is a mouse or a mammoth?—*Daily News.*

THE BRITANNIA TUNNEL-BRIDGE.

BY MAJOR-GENERAL PASLEY.

As it is well known, that when examined before a select committee of the House of Commons on the 6th of May, 1845, on the means of passing the Chester and Holyhead Railway over the Menai Straits, I approved of the tubular bridge then proposed by Mr. Robert Stephenson, engineer of that company. I think it a duty to myself, if not to the public, to offer some observations on the various projects for effecting the same object, successfully brought forward by him, of which that alluded to was the second.

In the first plan, which had previously been referred to me officially, by desire of the Earl of Dalhousie, in the month of February of the same year, when I had two interviews with Mr. Stephenson on the subject, he proposed to throw a massive substantial bridge, with two segmental cast-iron arches, each of 350 ft. span, over the Straits, having a clear height above the water of 116 ft. in the centre, and of 50 ft. at the springing of each of those arches, which were to be supported by an intermediate pier of masonry 120 ft. wide, on a shoal called Britannia Rock, and on two abutments, also of masonry. His plan of operation for putting the pieces of iron for his arches together successively, so as to balance each other, by working outwards from the upper part of the pier, and of the abutments, until his semi-arches should meet at the centre of each opening, seemed to me to be crude and ill-digested at the time, and either impracticable, or nearly so. As I had often previously reflected upon the subject, I gave Mr. Stephenson my opinion that, in consequence of the impossibility of obtaining any support from below, a suspension bridge, such as that previously erected by Mr. Telford over the same straits, which being everywhere 100 ft. high, offers no impediment to the navigation, and having in its present state strength enough to bear the weight of the heaviest railway train, but not with safety, owing to the flexibility and extraordinary undulations of the roadway in a gale of wind, might be rendered efficient for all railway purposes by four vertical trusses, one on each side of the two lines of rails, which, if of sufficient depth, would produce that rigid inflexibility of roadway, without which no railway bridge can be considered safe; a principle first adopted by Mr. Tierney Clark in the construction of the suspension bridge at Hammersmith, and more recently by Mr. Rendell, with no less success, in his repairs of the suspension bridge at Montrose, after one-third of the roadway had been carried away by a storm, on the 11th of October, 1838, when I was travelling in the Highlands of Scotland, which drew my attention to the subject, and induced me to offer a paper on suspension bridges to the Institution of Civil Engineers, which was published in their *Transactions* for 1840. I further suggested to Mr. Stephenson, that a suspension bridge for passing a railway over the Menai Straits might be trussed to advantage by wrought-iron lattice work, such as Sir John McNeill had adopted for passing the Dublin and Drogheda Railway over the Royal Canal near Dublin, by a bridge of 140 ft. span. Afterwards the Lords of the Admiralty employed Sir John Rennie and Mr. Rendell, civil engineers, and Capt. Vidal, R.N., to examine that part of the Menai Straits where the railway bridge was proposed, and to consider what conditions they thought necessary to prevent the navigation from being injured. On receiving their report, the Admiralty required that the Chester and Holyhead Railway Company, in making their bridge over the Menai Straits, should not construct the central pier on Britannia Rock wider or longer than 50 ft., and that there should be two openings between it and the abutments, each of 450 ft. in clear width; and everywhere to be of 105 ft. in clear height above high water level.

Mr. R. Stephenson's second plan, when thus obliged to withdraw the former, was to erect a suspension bridge of the usual construction, in order to obtain a platform for his further operations as I had before suggested. But the sort of bridge which he now proposed to put together by this means was of a novel and very ingenious construction, consisting of two large tubes of boiler iron, illeptical in section, and each measuring 30 feet by 15, in clear height and width; and, as he proposed that these tubes, though resting on a central pier of masonry, were to pass entirely across the Straits from one side to the other, observing the conditions prescribed by the Admiralty, it is evident that they could not be much less than 1000 ft. in length, when finished.

On the 5th of April, and afterwards on the 6th of May, 1845, Mr. R. Stephenson admitted, in examination before the select committee of the House of Commons, that the above was the only possible mode of throwing a bridge of such large openings over the Menai Straits, but he had so much confidence in the strength and rigidity of his proposed tubes, that, after they should be placed, he thought the suspension apparatus might be removed with safety. When I was examined by the same committee, on the last-named day, I gave my opinion that the tubular bridge proposed by him would be strong and safe; and that, when properly fixed, it would not be injured by gales of wind, though I was not convinced that such tubes would be better than vertical trusses; but I differed entirely from the suggestion Mr. Stephenson had thrown out, as to the expediency of removing the suspension apparatus—a measure which I thought would not only be unnecessary, but that it might endanger the security of the bridge.

From this, his second project, Mr. Stephenson has since departed, having been induced to give up elliptical and adopt rectangular tubes, in consequence of experiments tried at his request in 1846, by Mr. W. Fairbairn and Mr. E. Hodgkinson, both very experienced and skilful in the uses of iron, as applied to practical architecture and engineering, and the latter having investigated the subject mathematically, and laid down rules which have been published, and are deservedly held in high estimation; this, however, may be considered rather a modification, than a change. Not so, the decision afterwards adopted by Mr. Stephenson, of abandoning the suspension principle altogether; instead of which he now proposes, as I have been informed by Capt. Moorsom, R.N., chairman of the Chester and Holyhead Railway Company, to put together in succession each of his tubes, which, according to this new arrangement, will be four in number, on a bridge of boats, which will first be formed parallel to the shore, and will then be swung into the proper transverse position by the quarter-circle movement, common in the practice of military bridges, after which the tube is to be suspended by chains; and though either of the sides will expose to the wind a surface of at least 1400 square feet, considerably exceeding the area of all the sails of a 28 gun ship, and will weigh, as I am told, about 1200 tons, each of those unwieldy masses is to be raised up nearly 100 ft. by hydrostratic pressure, and thus deposited and fixed on the lofty pier and abutment of masonry. If the proposed modes of passing the Chester and Holyhead Railway over the Menai Straits had not been twice referred officially to me, as before stated, I should not have made any comments upon Mr. Stephenson's proceedings; but, under the circumstances above stated, I feel it my duty to express my entire dissent from this rash, if not impracticable, plan of operation, which cannot even be attempted without the risk of some very serious disaster, except at the high water slack of a neep tide, and in a perfect calm.

He has now, to my knowledge, proposed three projects, which have just been described, all widely differing from each other, for passing the Chester and Holyhead Railway over the Menai Straits; and I think that his second plan, the only one which I approved, would have been sufficiently arduous in itself, without adding to the difficulty, and diminishing the safety, of the attempt by the abandonment of the suspension principle; if he persists in this, his third plan of operation, the chances are, that the first tube which he attempts to raise will find its way to the bottom of the straits.

Notwithstanding the objections publicly made by Mr. Locke, at Chester, to the interference of Government departments with railway bridges, every disinterested person will admit that the Lords of the Admiralty only did their duty in putting a salutary veto upon Mr. R. Stephenson's first project, which, if it could have been carried into effect, of which I entertain great doubts, would have seriously injured the navigation of the Menai Straits, by rendering them impassable for many of the coasting vessels now employed there.

TO THE EDITOR OF THE *MINING JOURNAL*.

Sir,—It is with unfeigned satisfaction that I perused the letter of General Pasley, which appeared in the *Times* of the 3d inst. I am rejoiced to find that the Government Inspector has at length broken silence, and confirmed by an official sentence the now prevailing opinion of scientific men as to the dangerous character of Mr. Stephenson's proposed tubular bridge across the Menai Straits. If I may so far trespass on your valuable space, I now propose briefly to prove to your readers that, even supposing the bridge is completed, and has been tested by the transit of heavy trains, still it can never be considered safe, and that no inference as to its strength at any one period can be drawn from experiments made at any previous period. If the bridge were flexible, and the strains to which it is subjected purely statical—that is, strains such as would occur in a loaded and quiescent beam—then, for a given weight of the bridge and its load, we would accurately determine the stress at any part, and, consequently, apportion the thickness of the material at that part, in order that it might endure without fracture the determined strain. But, unfortunately, the strains to which the tubular bridge, from its great length and consequent flexibility, and the transit of trains, would be most liable, are not of a statical, but dynamical, nature. They are strains such as would arise from the blow of a hammer, not from the mere pressure of a heavy body at rest, and their amount it is impossible accurately to estimate. Moreover, the constant recurrence of these dynamical strains would tend continually to loosen the bolts at the joints of the tube, and to reduce the character of the iron from that of wrought or fibrous to cast-iron, or iron of a crystalline, and consequently brittle, texture. The bridge, therefore, would be getting weaker day by day, while the experiments which might occasionally and from time to time be instituted, to test its strength would only increase the subsequent danger. With an earnest hope that the lives of the public in general never may, and a firm assurance that my own in particular never will, be jeopardized on so hazardous a structure,

August 4. I remain, Sir, your obedient servant, A Mathematician.

A Yarn on Hemp.—Invaluable plant, pride of intelligent agriculture, that tendest thine own fibre, and strength to him that rightly cultivates thee, and constitutest the greatest element of mechanical power! What does not England, the world itself, owe to that growth, which we now contemplate? Armies are encamped within thy walls, thou fowest forth the ship of discovery on her venturous way, and carriest man and his merchandise to the Equator and the Pole! Vain were the auspicious breeze unless it blew upon thy opening sails; and what were the sheet-anchor, but for that cable of thine which connects it with the ship. Vegetable iron, incomparable hemp! Extemporaneous memory can scarcely follow thy services. Talk of the battering ram, but what propelled it forward! The shot, whizzing in the teeth of adverse winds, carries thy coil to snatch the sailor from the rock where he stands helpless and beyond aid from all the powers and productions of man and nature but thine! Thy ladder, and thine alone, can rescue from the house on fire! Look at the fisheries all over the world; the herrings of Scotland and the cod of the Baltic might defy us but for thee. What were wells and windlasses without thee? Useless as corkscrews to empty bottles. Then art the strong arm of the pulley and the crane. Gravitation itself, that universal tyrant, had bound all things to the earth, but for thy opposition. The scaffolds were thine from which grew the Colosseum, and the Pyramids have arisen in thine arms. The kite of science, which went crusing among thunder clouds to bring down to a modern Prometheus the spark which ignites the storm, was held by fibres of thine. The diver and the miner cling to thee for safety, and they that hunt the wild bird's egg on the sea-shaken cliff as they swing over the frightful abyss. With the lasso the bold Matador, like the Retiarius of the ancient arena, makes the cast that is for life. Then the fine arts! Carrara sends her block for the lacoon by aid of thine; and what were all the galleries in Europe but a collection of gilt frames, but for thy backing and support. By thy subserviency alone (for what were panel or laminated copper for such gigantic works) did Raffaelle bequeath so many legacies of his immortal genius. It is the strength of thy fibres, that is the strength of the leaded upper tables of Paul Veronese; and the velvets, the fury, the satins of Titian and Vandyke are quilted upon thee. Nor disdainest thou to render to a man, who bruises thee to try thy virtue, a thousand humbler services. Thou preservest our horses from flies, our fruit from birds! and who has not felt how thou cheerest the weary length of continental travelling by the crack of the whipcord as the approach of a new relay?—*Blackwood's Magazine.*

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IRISH WASTE LAND IMPROVEMENT SOCIETY,

5, ST. MILDRED'S-COURT, POULTRY, LONDON.

Notice is hereby given, that the next HALF-YEARLY GENERAL MEETING of proprietors of this Society will be HELD at the King's Head Tavern, in the Poultry aforesaid, on Tuesday, the 31st of August inst., at One o'clock precisely. And Notice is also hereby given, that there are two vacancies in the direction, which, in conformity with the Act of Incorporation, must be supplied at the said meeting. 51

By order of the court of directors,

August 3, 1847. FREDERICK FRY, Secretary.

ACKERMANN'S REGISTERED BINDING PIN

is by far the BEST yet INVENTED, for HOLDING loose MANUSCRIPTS, SERMONS, MUSIC, WEEKLY PAPERS, and all unstitched publications. It is neat in appearance—is applied in a few seconds—can be repeatedly used, and does no injury to the paper. Cards of 48 lackered, or 50 gilt, pins, sold at 6d. and 1s., by Ackermann and Co., No. 96, Strand, and all stationers and music sellers. 52

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 53

[ADVERTISEMENT.]

TO THE SHAREHOLDERS IN THE RHYMNEY IRON COMPANY.

GENTLEMEN,—A vacancy having occurred in your direction, by the decease of Francis Rongemont, Esq., I beg to inform you, that it is my intention to become a CANDIDATE for the vacant office—and I beg to solicit the favour of your vote and interest.

If elected, my constant attention and best energies shall be devoted to the interest of your company. I have the honour to be, Gentlemen,

Your most obedient servant, 54

The Palace, Bromley, Kent, July 30, 1847. COLES CHILD.

TOTTENHAM AND EDMONTON GAS-LIGHT AND COKE COMPANY.—The vast increase in buildings and population around every one of the suburban districts of the metropolis, has caused an extensively increased demand for gas, which it is not possible for the London establishments, large as they are, to supply; and, to secure this now absolute necessary of life, local establishments will, doubtless, arise in various localities as they extend in importance. The population of Tottenham and Edmonton jointly amounts to above 18,000 persons; and there was recently erected a gas establishment as a private speculation. A company is now being formed for the purchase of these works, which stand on nearly two acres of freehold ground, and which can be easily enlarged to an extent sufficient to supply four times the present demand. The projectors feel certain of paying 6 per cent. for the first year's operations; and from the increasing demand for supplies of gas, arising from its introduction into private houses, they anticipate greatly-increased dividends in future. The mode of manufacture, and probable extension in use of gas, will be fully understood on reference to an excellent series of papers on the subject, by Mr. Hedley, published in the *Mining Journal* in December and January last.

PLATT'S IMPROVEMENTS FOR CONSUMING SMOKE.—Mr. John Platt, of Oldham, has just obtained a patent for economising fuel, and preventing waste by smoke in furnaces of steam-boilers. By this plan there are suitable dampers for admitting and regulating the air to the main flue between the furnace and chimney, and into the ashpit when necessary; but the novelty in the arrangement is, that they are self-acting, being operated on by a steam-gauge of larger dimensions, and different construction than usual. It consists of an outer and inner cylindrical vessel resembling a gasometer; the outer vessel is supported by iron framing, and contains either water or mercury as a packing, and so arranged that the inner inverted vessel may be forced up when a pressure is exerted by the steam, and, for this reason, the inner cylindrical vessel is nicely suspended, having a level and counterbalance weight attached for that purpose, and which admits of any requisite adjustment; there is also a guide or guides to direct the vessel in its ascent or descent, the height depending on the pressure of the steam. By suitable rods and levers, the above-named dampers are regulated, the blowing machine is also regulated according to the state of the fire, and a feed apparatus over the furnace is made to discharge fuel on to the fire when necessary, and all by the action of the steam itself

NEW MODE OF PROPELLING STEAM-VESSELS.—Mr. J. Mackintosh has obtained a patent for a novel method of propelling boats by steam; but the diagrams and description in his specification are so exceedingly vague as to be thoroughly incomprehensible, so that we can do no more than give his own account of the affair. The diagrams represent two lines of flexible tube, placed on each side outside the boat, and centrally occupying about one-half its length; and his specification says—"The arrangements allow of the steam being admitted at either end of the tubes, so that the boat may be propelled in any required direction; and in proportion as the steam advances aft, the tendency of the vessel will be to move forward, or in a contrary direction to the course of the stream." We confess our poor mechanical knowledge does not allow us to make head or tail of the matter.

A WASHING MACHINE ON AN ENTIRELY NEW PRINCIPLE.—It may at first appear that the above title is a subject very unsuitable for the columns of the *Mining Journal*; but when it is called to mind, that we are the patrons of every mechanical improvement, however humble, and that we profess to lay before our readers every invention, with the particulars of which we become informed, and which we find really an improvement, we trust it will be thought that we are not encumbering our columns on the present occasion. Numerous have been the attempts to construct a machine which shall supersede the rubbing by the hand the linen, &c., in the operation of washing; but they have all been objectionable, either from total inefficiency, or from tearing the articles. Mr. Jones, of 106, London Wall, whose mortice-cutting machine we have noticed on former occasions, is the inventor; and, from what we have seen of the operation of the machine, it appears he has been highly successful. The machine consists of a strong deal trough, closed at one end, and with a semi-circular bottom; in the centre is a division full of holes, moving on a centre, by working a handle, which stands upright through the cover. A short distance from the back is also another partition, full of holes; and the clothes, properly soaped, are placed between. On working the handle backwards and forwards, the hot water is squeezed with great force completely through the pores of the material, and again rushes back, on the withdrawal of the moveable centre. A very short time suffices to cleanse by this method the most dirty linen, and without the slightest chance of injury to the fabric. They are extremely easy to work, are calculated greatly to diminish labour with the most satisfactory results, and it will at once be seen that the construction is in every way philosophically correct.

THE "GREAT BRITAIN" STEAMER.—Thursday last being the day appointed for raising this ill-fated vessel sufficiently high out of water to have her hull examined and repaired, the operations were commenced about twelve o'clock, and were crowned with perfect success. She was raised two feet, and her keel is now quite clear of the sand. When the tide receded workmen were actively engaged in repairing the damage done to her hull. It is now certain that this immense leviathan will be got afloat and off by the next spring tide. From information obtained on the spot, we are justified in stating that the vessel may be expected to be in dock, on the other side of the Channel, in about a month.—*Ulster Gazette.*

TO RAILWAY COMPANIES, ENGINEERS, &c. &c.—

WANTED, A SECOND-HAND FOUR-WHEELED NARROW GAUGE LOCOMOTIVE ENGINE, in good repair. The four wheels to be coupled: diameter of cylinders 12 inches, and the weight in working trim from 10 to 11 tons.—Apply, with particulars and terms, to Mr. John P. Roe, engineer, Rhymney Iron-Works, Abergavenny. 55

August 4, 1847.

BRISTOL AND EXETER RAILWAY COMPANY.—

Notice is hereby given, that the next HALF-YEARLY GENERAL MEETING of proprietors of this company will be HELD (in pursuance of the Act of Parliament) at the White Lion Hotel, in the city of Bristol, on Wednesday, the 1st of Sept., at Twelve o'clock. 56

The chair will be taken at One o'clock precisely.

JAMES W. BULLER, Chairman.

The transfer books will be closed on Saturday, the 21st of August, and not be reopened until after the said general meeting, on the 1st of September.

Shares in arrear do not entitle the holders to vote, nor are proxies valid, unless lodged with the secretary five days, at the least, before the meeting.

By order of the directors, J. B. BADHAM, Secretary.

Bristol Office, Broad-street, July 30, 1847.

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

Notice is hereby given, that the HALF-YEARLY DIVIDEND, at the rate of 12½ per cent. per annum, ordered at the general meeting of this company, held on the 27th July last, will be PAYABLE at the company's offices here, on and after Monday, the 16th inst. 57

By order of the board, A. C. HOWDEN, Secretary.

Offices, 2, Moorgate-street, London, August 4, 1847.

LONDON, BRIGHTON, AND SOUTH COAST RAILWAY.

ENGINES AND ENGINE-HOUSES TO BE LET OR SOLD.

The directors will be ready, on the 14th of August next, to RECEIVE APPLICATIONS to RENT, or PURCHASE, the ENGINES, ENGINE-HOUSES, WATER-TANKS, RESERVOIRS, &c., at FOREST-HILL or CROYDON.

ATMOSPHERIC STOCK FOR SALE.

ONE PAIR of CONDENSING ENGINES, of 50-horse power each, with air cylinders, 57 inches diameter, 3½ feet stroke, made by Messrs. Maudslay, Field, and Co., now fixed at Croydon.

ONE PAIR of ditto ditto, at Forest-hill.

ONE PAIR of ditto ditto ditto. 58

Each pair of the above engines is furnished with three Cornish boilers.

FOUR THOUSAND to FIVE THOUSAND TONS of CAST-IRON ATMOSPHERIC TUBES, 15-inch diameter pipes and valve boxes.

About TWELVE MILES of LONGITUDINAL VALVES.

Also, the same length of WROUGHT-IRON RODS, ¾-inch diameter, together with a quantity of BOLTS, SCREWS, &c., to complete the same ready for fixing.

Parties desirous of purchasing all, or any portion of the above, are requested to send in sealed tenders, marked "Tenders for Atmospheric Apparatus," under cover, addressed to the secretary, on or before Saturday, the 14th August next.

Purchasers of any part of the above may have the same delivered by the company at New Cross or Croydon; but parties purchasing the engines for removal, will have to take them down, and load them on the company's trucks.

Further particulars may be known on application to Mr. R. J. Hood, engineer, Brighton.

London Terminus, July 8, 1847. By order, T. J. BUCKTON, Secretary.

LONDON, BRIGHTON, AND SOUTH COAST RAILWAY COMPANY.—CONTRACT FOR RAILS.

The LONDON, BRIGHTON, AND SOUTH COAST RAILWAY COMPANY is ready to RECEIVE TENDERS for ONE THOUSAND TWO HUNDRED TONS of PERMANENT RAILS, of the double-headed pattern—weight 75 lbs. per yard, delivered free of expense to the company, at New Cross, Shoreham, or Newhaven. The tenders to state when the same can be delivered. 59

Further particulars may be obtained from Mr. R. Jacomb Hood, engineer, Brighton.

Tenders to be delivered, under cover, to the secretary, on or before the 30th instant, at noon. T. J. BUCKTON, Secretary.

London Terminus, August 5, 1847.

ELECTRIC TELEGRAPHS.—We beg to notify to all RAILWAY COMPANIES,

that, having secured LETTERS PATENT in *all parts of Europe*, as well as *America*, for our "ELECTRO-TELEGRAPHIC CONVERSER," we shall, on and after the 19th of this month (August), be ready to exhibit its advantages over all other TELEGRAPHS, and to demonstrate its *certainty*, *power*, and *simplicity*, with a THOUSAND MILES OF WIRE, and through a LARGER NUMBER OF INSTRUMENTS *than can be used under any existing principle.* 60

After which we shall be happy to treat *liberally* for its adoption, and to GRANT LICENSES, without control or restriction as to its uses.

July 28. BRETT & LITTLE, Furnival's Inn, London.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED PATENT ELASTIC METALLIC PISTONS. 61

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S 62

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES,

RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 63

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,

Goswell Mews, Goswell-road, London.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING

AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 64

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

TO MINE AGENTS, MINE SURVEYORS, &c.—

W. WILTON,

MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENT MAKER,

ST. DAY, CORNWALL,

Begs to call the attention of MINE AGENTS and SURVEYORS to his MINER'S THEODOLITE, and other IMPROVED INSTRUMENTS, adapted to MINE SURVEYING; and to assure them, that, from many years' constant application of his energies in one of the most active mining districts to this particular branch of mathematical instrument making, he flatters himself he is able to furnish instruments, equal in point of accuracy and workmanship, and superior as regards adaptation to the wants of the miner, to those supplied by almost any other house. 65

*** A descriptive price list sent free per post, on application.

Just published, Part I.,

COMBUSTION of COAL, CHEMICALLY & PRACTICALLY

CONSIDERED. With coloured plates. 66

By CHARLES WYE WILLIAMS, Esq.

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11, *BOLT-COURT, FLEET-STREET, LONDON.*

W. J. respectfully informs AUTHORS, BOOKSELLERS, PRINTERS, &c., that, having had long practical experience in DRAWING and ENGRAVING, of every variety—viz.: Inventions of all descriptions, for Engineers, Machinery, Figures, Landscapes, Architectural and Perspective, Agricultural and Anatomical subjects; Specimen Books for Civil Engineers, Ironfounders, Lamp Manufacturers, Silversmiths, and every other Branch requiring Illustrations, he is enabled to speak with confidence, as to the satisfaction he could give with regard to promptness, accuracy, and economy. 67

Weekly and Monthly Publications Contracted for.

SMITH AND ENGLISH (LATE ANDREW SMITH),

PRINCES-STREET, LEICESTER-SQUARE, LONDON,

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PATENTEES and MANUFACTURERS of Improved Steam-engines, Rapid Steam Generators, Railway Wheels, Rails and Chairs, Propellers for Canal and River Navigation.

ROPE-MAKING, FLAX-DRESSING, AND OTHER MACHINERY,

Raising and Lowering Machines, Wharf, Warehouse, and Truck Cranes, Tramway, Traversing and Stationary Purchase Crabs, Tackle, &c.—Also, Steam-engines and Boilers, of various constructions; Bone, Sugar, and Mill Work, and Machinery of every description manufactured and repaired; Saw-mills, Breweries, and Factories attended.

Planing, Boring, Turning, Screw-cutting, &c.

STRONG MIXING PIG-IRON.—The YSTALYFERA

IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:— 69

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of great *springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 9-10ths, when afterwards broken, presented but a slight deviation from a right line; and in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented *a regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,

Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS.

DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath. 70

Dated June 22, 1847.

ELBOROUGH SILVER-LEAD, CALAMINE, AND BARYTES MINE.—PROSPECTUS.

This MINE is situated in the parish of HUTTON, Somerset, within four miles of Weston-Super-Mare, and Uphill Quarry, and 2½ miles of the Banwell station, on the Great Western Railway, is divided into 256 shares, and managed on the Cost-book System. The sett, which comprises 800 fathoms in length and 400 fathoms in width, contains a great number of lodes, which have proved very productive as far as they have been wrought.

It is well-known that for centuries past large quantities of lead ores have been raised by the system of gruffing, a rude sort of mining of the district, and parties so working, obtained large profits, although paying at the rate of 1-6th and even 1-4th to the lord, as dues or royalty. But, although this sett has been a very productive one, even by the rude operations of the gruffers on the backs of the lodes, and within a few fathoms of the surface, yet for want of more mining experience nothing has been done effectually in proving the lodes; traces of the gruffer's operations are visible for several hundred fathoms in length, and the rubbish, or waste deposits therefrom, on the surface, sufficiently indicate that large returns may be expected, if these mines are properly worked. 71

The report of the neighbourhood induced the present company in May last (1846) to solicit a grant of the sett; and having obtained it at moderate dues, they commenced clearing up the old workings in several places; and having fully satisfied themselves of the value of the sett, they have commenced sinking two new shafts, in order to get under the old workings, and to effectually work the mine—one of these shafts is on a perpendicular lode, having six other lodes underlaying towards it, and which, if they continue their present underlay, will all be intersected within the depth of 60 fathoms from surface.

The other is on a lode from which several tons of lead have been raised by the present company, from the old workings, which on this lode have been prosecuted to the depth of 20 fathoms, leaving a course of lead now in the bottom—but having been wrought in such a zig-zag manner, they are unfit for the purpose of mining advantageously; this shaft is, therefore, being sunk east of these workings in whole ground.

It is the general opinion of miners acquainted with the locality, that this mine can be prosecuted to the depth of 100 fathoms, without the aid of a single pumping-engine; and this, with other advantages connected with the concern, justify the proprietors in stating, that in their opinion the outlay of a comparatively small capital will bring the mine into a profitable state of working.

REPORTS.

TO MR. R. VIVIAN, TUCKINGMILL, CAMBORNE, CORNWALL.

SIR,—I have been a resident in this part for the last eight years, and have traversed this mineral country from the Bristol river to Wells, which is about 30 miles north and south, and from Bath to Bridgewater river, which is about 40 miles, east and west, and have, in so doing, examined very carefully the geological and mineralogical position of those localities, and find they are composed of mineral or mountain limestone, old red sandstone, new red sandstone, lias, penant, magnesian limestone, and conglomerated limestone, quartz, fluor-spar, silex, and jasper; there are hundreds of lodes and veins in this range, which carry metallic and mineral ores, such as lead, iron, copper, manganese, calamine, barytes, pyrites, reddle, antimony, coal, yellow ochre, and white lead ores.

Having heard that there were some of my countrymen at Elborough, near Banwell, working a mine, I went to see them on Tuesday, and found Capt. Trevithick and his pare dressing lead and calamine; Capt. Trevithick asked me to walk around the mine with him; I went underground at Vivian's shaft, and saw Vivian's lode, 17 fathoms deep, nearly perpendicular—a very kindly lode, 2½ ft. big, composed of flookan, elvan, and lead—good saving work. At Chapman's shaft a strong lode, and very kindly north lode: there are several lodes south of Vivian's lode, and underlaying north, which I think are likely to drop in and improve this lode in depth. I think this altogether a very promising mine. It is in the mountain limestone that this mine is, and it is in the mountain limestone that the principal British lead mines are situated, and they are those of Somersetshire, Derbyshire, Yorkshire, Cumberland, Shropshire, Flintshire, and Denbighshire—these are the most productive for lead and calamine.

The lead mines in Cornwall and Devon are in primitive rock, so that the Cornish and Devon miners in general know but little about limestone formation.

I think Somerset will make a great mining district, some day. I have an account of a little mine that paid in 1812, £806 15s. 10d. for dues; and take the average, they were no more than 15 fathoms deep, and they rose hundreds of pounds' worth, 5 or 10 fathoms deep; this mine is four miles east of Elborough Mine. THOMAS ROBARTS.

Oatland's Cottage, Wrington, near Bristol, Somerset, May 6.

SIR,—In compliance with your wish, I hereunder hand you a few remarks on the present appearances and future prospects of Elborough Mine.

This mine is situated on Elborough-hill, in the parish of Hutton, and about three miles distance from Banwell station (Great Western Railway); the set extends nearly a mile on the course of the lodes (eight or nine in number), nearly the whole of which have been worked on the backs, by the old men, and from the appearance of the work done, great quantities of lead have been raised.

I find your operations are at present confined to sinking a shaft on the course of Vivian's lode, which appears to be the principal one, and most regular in its course, nearly perpendicular—its longitudinal direction is about 10° south of east; this shaft is sunk 16½ fathoms from surface, at which point the lode is 2 feet wide, composed principally of light-coloured flookan, spar, and calamine, impregnated with lead throughout—a very kindly lode, indeed; I would strongly recommend you to get down this shaft with all possible speed, bearing in mind there are four or five lodes to the south of this, dipping towards the lode you are now sinking on; should they retain their regular course and underlay, you will have the junction of these lodes in the shaft, within the depth of 60 fathoms; when down about 16 fathoms from surface with this shaft, they cut into a large cavern, which has been made into a good whim-plat—here an end was begun, driving east of shaft, where the lode is at present small—composed of flookan, spar, and lead. I would also recommend you to place four men in this end, as it is my opinion that the whole of the lodes in this part approximate, and form a junction between 20 and 30 fathoms further east than you now are—this being done, you will fairly prove this part of the mine; from the favourable state of the ground, a great quantity can be developed in a short time; should it continue as it now is, the cost for driving or sinking will not exceed 60s. per fathom.

On Chapman's works the lode has been laid open about six fathoms deep, where it is 3 feet wide, composed of barytes, calamine, and beautiful spar, intermixed with lead—a very promising lode.

Further north still, about 60 fathoms, there is a parallel lode with the one last mentioned; this lode has been wrought on 14 fathoms deep, where it is 2 feet wide—composed of barytes and a little lead; Capt. Trevithick informs me the returns from this place have been equal to the outlay; these works are for the present suspended.

Before I conclude, I beg to observe, that it is my opinion, from the congenial strata in which the lodes are imbedded, and the promising appearance of the lodes at this shallow depth, that you will at no distant period have a profitable concern. F. C. HARPUR.

Mendip Hills Mines, May 6, 1847.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN,

J. MURDOCH (successor and late assistant to Mr. Hebert)

Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS, 72

(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—

LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, JUN., & CO., DARLASTON, 73

STAFFORDSHIRE,

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

SIR JAMES MURRAY'S FLUID MAGNESIA.—Prepared

under the immediate care of the inventor, and established for upwards of 30 years by the profession, for removing BILE, ACIDITIES, and INDIGESTION—restoring APPETITE, preserving a moderate state of the bowels, and dissolving uric acid in GRAVEL and GOUT; also as an easy remedy for SEA SICKNESS, and for the febrile affection incident to childhood it is invaluable.—On the value of magnesia, as a remedial agent, it is unnecessary to enlarge; but the fluid preparation of Sir James Murray is now the most valued by the profession, as it entirely avoids the possibility of those dangerous concretions usually resulting from the use of the article in powder, and in the over-dosed liquids of detected imitators.—Sold by the sole consignee, Mr. Bailey, of North-street, Wolverhampton; and by all wholesale and retail druggists and medicine agents throughout the British empire, in bottles, 1s., 2s. 6d., 3s. 6d., 5s. 6d., 11s., and 21s. each. 74

The Acidulated Syrup, in bottles, 2s. each.

N.B.—Be sure to ask for "Sir James Murray's Preparation," and to see that his name is stamped on each label, in *green ink*, as follows:—"James Murray, Physician to the Lord Lieutenant."

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*** It will at all times save much delay and inconvenience, if communications are directed simply To THE EDITOR, *Mining Journal Office,* 26, FLEET-STREET, LONDON.

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